Aus dem Institut für Agrar- und Ernährungswissenschaften
(Geschäftsführender Institutsdirektor: Prof. Dr. Reinhold Jahn)

der Naturwissenschaftlichen Fakultät III
(Dekan: Prof. Dr. Peter Wycisk)

der
Martin-Luther-Universität Halle-Wittenberg

Fachgebiet: Agrarwissenschaften

Influence Strategies in Supply Chains and Networks – A Study of Russian Agri-Food Business

DISSERTATION

zur Erlangung des akademischen Grades
doctor agriculturarum (Dr. agr.)

von

Diplom-Betriebswirtin, Master of Business Administration in Agriculture

Vera Belaya

Halle (Saale) 2012

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geb. am 15.12.1980 in Astana, Kasachstan

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Faithfully yours,

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Pfalzgrafenweiler, the 25th of June, 2012

Summary

The use of influence strategies as a research topic has been receiving increasingly more attention lately. However, only a few scientific works have studied the use of, and the actual influence strategies themselves, in the context of supply chain networks in the Russian agri-food business. We have deliberately chosen Russia since many foreign companies have invested in this competitive market in the last years. Due to its central position in a supply chain network we hereby focus on the focal company's perspective. As such networks are of pyramidal-hierarchical structure, they possess a focal company which has the power to align the actions of the network partners and holds the ability to coordinate the network.

The actual role that influence strategies play in supply chains and networks has been treated in contrasting ways in the literature. For many decades there has been discussion going on about the positive and negative sides of influence strategies. The mere existence of a more powerful firm in supply chain networks gives rise to power-created dependence which can lead to opportunism by partners. This can dissolve many of the relational elements that are necessary for the development of effective supply chain relationships. The negative side of power is seen in the exercising coercion, which may reduce the frequency of exchange among actors and hinder conflict resolution, as well as create difficulties in fostering the information flow which threatens successful negotiation of an exchange. However, influence strategies can also have a positive effect on supply chain relationships, as they are used as an effective tool in correcting organizational problems, solving conflicts and promoting harmonious interorganizational relationships, which ultimately results in enhanced performance for the supply chain network.

In this context, the use of influence strategies represents one of the major elements of the supply chain management (SCM). In this regard, an intriguing research question arises of how to distinguish among and deal with different effects of the influence strategies in order to use them as an effective tool for SCM. This question appears to be an important one. Are there any criteria which determine when influence strategies might have a destructive impact, and when they are positive and constructive and can be used for good purposes? There is a need to investigate this phenomenon in order to close the existing gap in the literature and to contribute to the overall understanding of the role of power and influence strategies in supply chains and networks. Therefore, the aim of the thesis is to investigate the influence strategies in supply chains and networks and their role for SCM in order to work out an overall strategy to enable supply chain managers to select an effective mix of managerial mechanisms to coordinate the whole supply chain network.

We conducted both theoretical and empirical analyses to fulfill our aim. As part of the theoretical analysis we defined the existing gap in the literature and indicated how our research is connected with other areas of research. We also indicated the role of power and influence strategies and their relevance for chain management concepts by highlighting the importance of the defined research aims and tasks. We conducted a literature review on the concepts of networks, supply chains, strategic networks, supply chain networks and SCM and identified two important areas within this concept: coordination and cooperation. The next theoretical concept which we studied in the literature was influence strategies in supply chains and networks. We discovered the classification of influence strategies by French and Raven (1959)/Raven and Kruglanski (1970) (coercive, reward, expert, informational, legitimate and referent influence strategies) from a sociological point of view and applied it in the setting of supply chain networks and SCM. After reviewing the theoretical concepts we developed our own theoretical model on the role of influence strategies for SCM and a number of research assumptions and hypotheses about the

existence, role and use of influence strategies in the context of supply chain networks and their management.

The empirical analysis was conducted in the setting of the Russian agri-food business. After building the theoretical framework and examining the empirical setting we continued with an empirical investigation in the context of the Russian agri-food business. This part is based on two rounds of expert interviews conducted with experts of the Russian agri-food business and representatives of agri-food companies with foreign direct investments in Russia. The interviews were conducted on the basis of the designed survey tools which can be found in the appendices of the thesis. The questions correspond with the research assumptions and serve to test them. We analysed the results of these interviews using qualitative methods of research and discussed the results of the contents analysis. We also tested our theoretical model empirically in order to verify the formulated hypotheses and described the Partial Least Squares (PLS) technique used to evaluate the theoretical model and explained why we chose this technique. We have chosen PLS due to its suitability for prediction and theory building purposes, and the possibility to analyze complex models using relatively small sample sizes. Subsequently, we conducted the model assessment and discussed the results. The results of the empirical analysis represent valuable research findings and empirical contributions of the thesis.

1. Use of influence strategies in the supply chain management context
The use of influence strategies is an important managerial issue. The majority of scientific studies conducted to date have assumed that influence strategies are irrelevant and not suitable for being used in the SCM context. Their use has been considered to be based on power asymmetry and the abuse of power and leads to negative effects. Trust has been viewed as a better alternative for improving supply chain relationships. The studies dealing with relational constructs in supply chain relationships have paid attention to other constructs such as trust, commitment, relationship quality, etc. Our study disproves the above mentioned statements and offers a new perspective on the role of influence strategies for SCM. Power asymmetry is a natural state for any relationship including supply chain relationships. To believe that power asymmetry is bad is not correct. Powerful leaders in supply chain networks known as 'chain captains' can use the power advantage for the good of the whole network. In fact, our findings document that influence strategies could have a profound impact on the improvement of coordination and cooperation in supply chain networks. The influence strategies can have both positive and negative effects on coordination and cooperation within supply chain relationships and could be used to coordinate and foster collaboration without exploitative or abusive consequences. Here are three main conclusions of the thesis.

2. Expected effects of the use of influence strategies
A surprising conclusion is that expert influence strategies could be used not only for cooperation, but also for coordination purposes within supplier-buyer relationships. Our findings show that the use of expert influence strategies have the strongest effect among the six other kinds of influence strategies. Therefore, managers should strive to enhance the expert knowledge of the company by recruiting knowledgeable personnel and managing their expertise and skills in order to exercise this kind of influence strategies for improving SCM. We advise using expert influence strategies as a tool for SCM as a first priority. Another surprising example based on our findings is the use of coercive influence strategies, which turned out to have a negative effect in relationships with suppliers and buyers on both coordination and cooperation in spite of our expectation of positive effects on coordination due to their rule-setting nature. Very often managers apply coercive

influence strategies without considering the long-term effects on maintaining the relationship. However, the danger of destructive nature of coercive influence strategies should not be ignored when discussing their role and implications for successful cooperation in supply chain networks. Since coercive influence strategies are known for their punishing and aggressive nature, they have to be used only when it is absolutely necessary.

3. Management algorithm of using influence strategies

Perhaps the main implication of this research for managerial decision-making is that successful management of supply chain networks can be achieved by thoughtful use of certain influence strategies. Depending on the kind of influence strategies and the source they originate from, their effects may be completely different. It is important to understand the multifaceted effects of different influence strategies and apply them selectively for specific purposes. In order to use the influence strategies and to make the right choice according to the defined goal managers should consider the pros and cons of different strategies. We have developed a management algorithm of using influence strategies which should be based on the ranking of the influence strategies according to their expected effects in specific settings, the availability of certain resources, the cost-benefit approach to the implementation of the influence strategies and according to the pursued goal of the company. This is particularly valuable because chain management is not only about the alignment of actions (coordination) but also about the alignment of interests (cooperation). For example, coercive or reward influence strategies might have superb effects for companies having short-term goals and possessing financial resources, since such influence strategies provide extrinsic motivation to comply with the requirements in order to achieve favourable outcomes. On the other hand, other influence strategies (expert, informational and referent) might be more appropriate to facilitate both coordination and cooperation for companies which possess the expert knowledge, up-to-date information and strong positive image and want to invest in the long-term partnerships.

Overall, the results of our study have a high theoretical and practical relevance based on the developed rankings of influence strategies according to their effects on coordination and cooperation and due to the management algorithm for applying certain influence strategies for specific goals. The time has come for a new and fresh approach to solving managerial problems in the supply chain context. We hope that our research results and ideas will be interesting for both academics and practitioners and will encourage them to rethink their current practices and ideas and to use influence strategies as an effective tool in a problem-solving and constructive way to enhance the performance of a supply chain network as a whole, as well as of its individual members.

Zusammenfassung

Der Forschung zur Nutzung von Einflussstrategien wird in letzter Zeit immer größere Beachtung geschenkt. Trotz dessen gibt es in Hinblick auf Wertschöpfungsketten im russischen Lebensmittelhandel nur wenige wissenschaftliche Arbeiten über die Nutzung dieser Strategien. Für die vorliegende Arbeit haben wir unsere Untersuchungen auf Russland konzentriert – einen wettbewerbsfähigen Markt, in den während der letzten Jahre viele ausländische Unternehmen investiert haben. Wegen dessen zentralen Rolle, konzentrieren wir uns in dieser Arbeit auf die Perspektive des Schwerpunktunternehmens (des fokalen Unternehmen). Da die Unternehmensnetzwerke, die hier eine Rolle spielen, einen pyramidisch-hiarchischen Aufbau aufweisen, gibt es ein fokales Unternehmen, was den Schwerpunkt bildet, d.h. die Macht hat, die Aktionen von Partnern im Netzwerk aneinander auszurichten und zu koordinieren.

Die Rolle, die Einflussstrategien innerhalb von Wertschöpfungsketten und Netzwerken spielen, wird in der Literatur auf sehr gegensätzliche Weise behandelt. Seit vielen Jahrzehnten werden die Vor- und Nachteile von Einflusstrategien diskutiert. Die bloße Existenz eines mächtigeren Unternehmens in einem Netzwerk von Wertschöpfungsketten führt zu einer machtbasierten Abhängigkeitsstruktur, welche zu opportunistischen Verhalten bei den Partnern innerhalb der Kette führen kann. Das wiederum kann zur Auflösung vieler Verbindungselemente führen, welche aber für die Entwicklung von effektiven Beziehungen innerhalb der Wertschöpfungskette notwendig sind. Die Ausübung von Zwang, der die Häufigkeit des Austausches zwischen Akteuren innerhalb der Kette reduzieren und die Lösung von Konflikten sowie den Informationsfluss behindern kann, wird als negative Auswirkung von Macht angesehen, was außerdem die erfolgreiche Verhandlung von Tauschbeziehungen bedroht. Einflussstrategien können jedoch auch einen positiven Einfluss auf die Beziehungen innerhalb der Wertschöpfungskette haben, indem sie als effektives Werkzeug für die Korrektur von organisatorischen Problemen, zur Lösung von Konflikten und zur Förderung harmonischer zwischenbetrieblicher Beziehungen angewendet werden, was eine direkte Verbesserung der Leistungsfähigkeit des Netzwerkes zum Ergebnis hat.

In diesem Zusammenhang gehören Einflussstrategien zu den Kernelementen des Managements von Wertschöpfungsketten. Das wirft die wichtige Frage auf, wie zwischen den verschiedenen Effekten von Einflussstrategien unterschieden und wie mit diesen umgegangen werden kann, um sie effektiv für das Management von Wertschöpfungsketten einsetzen zu können. Gibt es Kriterien, welche bestimmen, ob Einflussstrategien eine desaströse oder konstruktive Wirkung haben? Die Untersuchung dieses Phänomens schließt eine Lücke in der bisherigen einschlägigen Literatur und trägt insgesamt zum Verständnis der Rolle von Macht und Einflussstrategien in Wertschöpfungsketten und -netzwerken bei. Das Ziel der vorliegenden Arbeit ist es deshalb, Einflussstrategien innerhalb von Wertschöpfungsketten und -netzwerken und die Rolle, die sie für das Management derselbigen spielen, zu untersuchen, und daraus eine Strategie abzuleiten, die es den Managern von Wertschöpfungsketten ermöglicht, eine effektive Mischung von Verwaltungsmechanismen für die Koordination ihres Netzwerkes auszuwählen.

Um dieses Ziel zu erreichen, haben wir sowohl eine theoretische als auch empirische Analyse durchgeführt. Als Teil der theoretischen Analyse haben wir bestehende Lücken in der Literatur identifiziert und aufgezeigt, wie unsere Forschung mit der Forschung in anderen Bereichen zusammenhängt. Außerdem haben wir die Relevanz von Macht und Einflussstrategien für die Managementkonzepte von Wertschöpfungsketten durch die Herausstellung der herausragenden Bedeutung unserer Forschungsaufgaben- und ziele demonstriert. Wir haben eine umfassende Literaturrecherche in Bezug auf

Netzwerkkonzepte, Wertschöpfungsketten, strategische Netzwerke, Wertschöpfungskettennetzwerke und Wertschöpfungskettenmanagement durchgeführt, und auf diese Weise zwei wichtige Konzepte identifiziert: Koordination und Kooperation. Als weiteres theoretisches Konzept wurden in der Literatur Einflussstrategien in (Netzwerken von) Wertschöpfungsketten genannt. Hier soll beispielhaft die Klassifikation von Einflussstrategien aus soziologischer Perspektive von French und Raven (1959) bzw. Raven und Kruglanski (1970) (zwingende, belohnende, fachkundige, informative, legitime und referenzierende Einflussstrategien) genannt sein. Nach der Aufarbeitung bestehender theoretischer Konzepte haben wir ein eigenes theoretisches Modell zur Bedeutung von Einflussstrategien für das Management von Wertschöpfungsketten entwickelt und eine Zahl von Annahmen und Hypothesen über die Existenz, Rolle und Nutzung von Einflussstrategien im Zusammenhang mit Wertschöpfungskettennetzwerken und deren Management aufgestellt.

Für die empirische Analyse wurde der russische Lebensmittelhandel als Bezugsrahmen gewählt. Nach dem Entwurf eines theoretischen und der Überprüfung des empirischen Rahmens folgt eine empirische Untersuchung der Gegebenheiten im russischen Lebensmittelhandel. Diese Untersuchung basiert auf zwei Interviewdurchgängen mit Experten des russischen Lebensmittelhandels und Vertretern von Unternehmen, die ausländische Direktinvestitionen im russischen Agribusiness getätigt haben. Als Grundlage für die Interviews dienten verschiedene Erhebungswerkzeuge, die im Anhang dieser Arbeit erläutert werden. Die Fragen richten sich nach den vorher gemachten Forschungsannahmen und dienen deren Überprüfung. Für die Auswertung der Interviews verwenden wir qualitative Forschungsmethoden und diskutieren anschließend die Ergebnisse der inhaltlichen Analyse. Auch unser theoretisches Modell wurde empirisch getestet, um vorangestellte Hypothesen zu verifizieren. Dabei wird die Technik der partiellen Regression der kleinsten Quadrate (Partial Least Squares, PLS) beschrieben, die für die Bewertung des theoretischen Modells benutzt wurde. An dieser Stelle soll auch erklärt werden, warum diese Technik für diesen Zweck gewählt wurde. PLS eignet sich hervorragend für Vorraussagen und Theoriebildungszwecke, und bietet die Möglichkeit, komplexe Modelle auf Grundlage von relativ kleinen Stichprobenumfängen zu analysieren. Im Anschluss wird das Modell bewertet und die erlangten Ergebnisse diskutiert. Die Ergebnisse der empirischen Analyse liefern wertvolle Forschungserkenntnisse und bilden den empirischen Grundstein der vorliegenden Arbeit. Die drei wichtigsten Schlussfolgerungen, die aus dieser Arbeit gewonnen werden können, sind:

1. Die Nutzung von Einflussstrategien für das Management von Wertschöpfungsketten
Die Nutzung von Einflussstrategien stellt ein wichtiges Managementproblem dar. Der Großteil der bereits existierenden Forschung dazu macht folgende Annahmen: Einflussstrategien sind irrelevant und nicht geeignet für das Management von Wertschöpfungsketten; ihre Nutzung basiert auf Machtasymmetrien sowie Machtmissbrauch und hat negative Effekte; Vertrauen ist die bessere Alternative für die Verbesserung von Beziehungen innerhalb der Wertschöpfungskette. Studien, die sich mit verschiedenen Aspekten und Arten von Beziehungen in Wertschöpfungsketten befassen, haben andere Elemente wie z.B. Vertrauen, Engagement/Verpflichtung, Beziehungsqualität etc. in den Vordergrund der Analyse gestellt. Unsere Studie widerspricht den oben erwähnten Aussagen dieser Studien und bietet eine neue Sichtweise auf die Rolle, die Einflussstrategien für das Management von Wertschöpfungsketten spielen können. Machtasymmetrie ist ein natürlicher Zustand in allen Arten von Beziehungen, einschließlich Beziehungen innerhalb von Wertschöpfungsketten. Daraus zu folgern, dass Machtasymmetrie per se schlecht sei, ist nicht korrekt. Mächtigere Anführer

in Wertschöpfungskettennetzwerken, sogenannte 'Kettenkapitäne', können ihre Macht zum Vorteil des gesamten Netzwerkes nutzen. Unsere Erkenntnisse bestätigen, dass Einflussstrategien eine tiefgreifende Wirkung auf die Koordination und die Zusammenarbeit innerhalb dieser Netzwerke haben kann. Sie können sich sowohl positiv als auch negativ auf die Koordination und Kooperation auswirken, d.h. Einflussstrategien können durchaus für die Koordination und Zusammenarbeit genutzt werden ohne damit einhergehender Ausbeutung und Missbrauch.

2. Zu erwartende Wirkungen der Nutzung von Einflussstrategien

Ein überraschendes Ergebnis ist, dass fachkundige Einflussstrategien nicht nur zu Kooperations- sondern auch zu Koordinationszwecken im Zusammenhang mit Anbieter-Käufer-Beziehungen genutzt werden könnten. Unseren Erkenntnissen zufolge haben fachkundige Einflussstrategien den größten Einfluss von den sechs oben genannten Strategiearten. Aus diesem Grund sollten Manager darum bemüht sein, durch die Anstellung von fachkundigem Personal Expertise ins Unternehmen zu holen, und deren Wissen und Fähigkeiten bestmöglich zu managen, um diese Art von Einflussstrategien zur Verbesserung des Managements ihrer Wertschöpfungsketten einsetzen zu können. Wir raten dazu, den Einsatz von fachkundigen Einflussstrategien zur obersten Priorität im Management von Wertschöpfungsketten zu machen. Ein weiteres überraschendes Resultat unserer Untersuchung ist, dass die Nutzung von zwingenden Einflussstrategien einen negativen Effekt auf die Beziehungen zwischen Anbietern und Käufern hat − sowohl hinsichtlich der Koordination als auch Kooperation. Wir hatten erwartet, dass eher das Gegenteil der Fall sein würde, d.h. dass sich aufgrund der regelsetzenden Natur ein positiver Koordinationseffekt ergeben würde. Manager wenden zwingende Einflussstrategien oft an ohne die Langzeitkosten der Aufrechterhaltung von Beziehungen zu kalkulieren. Die Gefahr einer möglichen destruktiven Wirkung von zwingenden Einflussstrategien sollte jedoch nicht ignoriert werden, wenn deren Rolle und Folgen für eine erfolgreiche Kooperation innerhalb von Wertschöpfungskettennetzwerken diskutiert werden. Da zwingende Einflussstrategien für ihre bestrafende und aggressive Natur bekannt sind, sollten sie nur angewendet werden, wenn es absolut notwendig ist.

3. Der Managementalgorithmus für die Nutzung von Einflussstrategien

Die vielleicht wichtigste Erkenntnis, die wir bei unserer Forschung für das Fällen von Managemententscheidungen gewonnen haben, ist, unter Umständen, dass Netzwerke von Wertschöpfungsketten durch den durchdachten Gebrauch von bestimmten Einflussstrategien erfolgreich gemanagt werden können. Abhängig von der gewählten Art der Einflussstrategie und ihres Herkunftsortes, kann ihr Einsatz ganz unterschiedliche Effekte haben. Deswegen ist es wichtig, die vielfältigen Wirkungen verschiedener Einflussstrategien zu verstehen und je nach Zweck die passende auszuwählen. Vor dem Einsatz von Einflussstrategien sollten Manager die Vor- und Nachteile verschiedener Strategien abwägen, um eine dem Ziel angemessene Wahl zu treffen. Wir haben dazu einen Managementalgorithmus entwickelt, der auf einem Ranking der Einflusstrategien entsprechend der zu erwartenden Effekte in spezifischen Umgebungen, dem Vorhandensein von bestimmten Ressourcen, dem verfolgten Ziel und einer Kosten-Nutzen-Analyse basiert. Dieser Ansatz ist insbesondere zu empfehlen, da das Management von Wertschöpfungsketten nicht nur die Abstimmung von Aktionen (Koordination) erfordert, sondern auch die Abstimmung von Interessen (Kooperation). Zwingende oder belohnende Einflussstrategien z.B. besitzen unter Umständen eine großartige Wirkung für Unternehmen mit kurzfristigen Zielen und großen finanziellen Ressourcen, da diese Einflussstrategien eine extrinsische Motivation für die Erfüllung bestehender

Anforderungen und damit das Erreichen von vorteilhaften Ergebnissen bieten. Für Unternehmen hingegen, die über Expertenwissen, aktuelle Informationen und ein stark positives Image verfügen, und die das Verlangen haben, in langfristige Partnerschaften zu investieren, dürften andere Einflussstrategien (fachkundige, informative und referenzierende) geeigneter sein, um sowohl die Koordination als auch Kooperation zu vereinfachen.

Ausgehend von den entwickelten Rankings der Einflussstrategien entsprechend der zu erwartenden Effekte und in diesem Zusammenhang dem Managementalgorithmus für die Anwendung einer bestimmten Strategie für die Erreichung eines spezifischen Zieles sind die Ergebnisse unserer Studie von hoher theoretischer und praktischer Relevanz. Es ist an der Zeit bei der Lösung von Managementproblemen im Bereich von Wertschöpfungsketten einen neuen Weg einzuschlagen. Wir hoffen, dass die Erkenntnisse unserer Forschung und unsere Gedanken zu diesem Thema sowohl für Wissenschaftler als auch Praktiker von Interesse sein werden und diese dazu anregen werden, aktuelle Praktiken und Theorien zu überdenken, und infolgedessen Einflussstrategien als ein effektives Problemlösungswerkzeug zu betrachten, mit dem sowohl die Leistungsfähigkeit eines kompletten Wertschöpfungskettennetzwerkes als auch die individueller Wertschöpfungskettenglieder verbessert werden kann.

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List of Abbreviations

AMOS	Analysis of Moment Structures
approx.	approximately
AVE	Average Variance Extracted
CEE	Central and East-European
CFA	Confirmatory Factor Analysis
CM	Category Management
CPFR	Collaborative Planning Forecasting and Replenishment
CRP	Continuous Replenishment Program
CSCMP	Council of Supply Chain Management Professionals
ECR	Efficient Consumer Response
e.g.	exemplī grātiā (lat. "for example")
EQS	Equations
et al.	et alii (Maskulinum), et aliae (Femininum) oder et alia (Neutrum) (lat. „und andere")
etc.	et cetera (lat. „und im übrigen")
FDI	Foreign Direct Investments
IT	Information Technology
LV	Latent Variable
LISREL	Linear Structural Relationships
MLE	Maximum Likelihood Estimation
MR	Multiple Regression
MV	Manifest Variable
n/a	Not available
PCA	Principal Component Analysis
PLS	Partial Least Squares
SCM	Supply Chain Management
SEM	Structural Equation Modeling
SPSS	Superior Performing Software System
VMI	Vendor Managed Inventory
WTO	World Trade Organization

List of Appendices

1. Introduction and Research Aims
1.1 General Introduction

The ranking of the world's largest retailers by Deloitte (2011) reveals that almost all players operate in numerous countries, with noteworthy business capacity in foreign markets. Large multinational retail chains and companies such as Wal-Mart, Metro and Auchan have established their presence in different countries across continents. Today many retail companies earn a significant share of their revenue in international markets. For example, over 50% of the sales of the German retailer Metro and over 80% of the sales of Dutch company Ahold come from the foreign operations (Hanf et al., 2009a). However, the process is still rather new, and it is clear that the process will proceed further, but perhaps in a more turbulent way than in the last decades. Over the past several decades, globalization and internationalization gave rise to new trends in the agri-food business worldwide. Internationalization and retail concentration coupled with changes in transition countries are the most important trends in retailing today. This process has accelerated in the last two decades. Retail business – in particular grocery retailing – has become increasingly global in scope (Reinartz et al., 2011). Less than 30 years ago almost all of the world's retail firms were purely national firms with a negligible share in foreign markets. This scenario has changed dramatically.

Except for some smaller subsidiaries in nearby countries, the retail firms only began their geographical expansion across the national borders in the 1990s. Whereas in 1992, the top 10 grocery retailers in Europe had a market share of only 27.8 percent, it had grown in the subsequent five years to 36.2 percent (Clarke et al., 2002). A similar revolution in retail concentration and internationalization has occurred all over the world. All of a sudden a small number of companies started to control a bigger share of the market. Indeed this kind of corporate involvement could be seen at all stages of the food chain (raw materials suppliers, trade, processing and retail). However, mostly retailers and big branded processing companies have had the courage to go global and to mark this whole development. Therefore, a further concentration of the national market by merger and acquisition appeared to be impossible in light of the already realized degree of concentration. As a result, the jump over the borders seemed to be the easiest way to continue the growth. Initially the stagnating trade in the domestic food market was the driving force for internationalization (George, 1997). It is observed that going abroad retailers export their business models into new markets, having a serious impact on the whole food chain. Therefore, they are regarded as one of the driving forces in the development of the agri-food business. It is argued that foreign direct investments are a more important source of structural change in developing countries than the WTO or trade policy (Swinnen, 2005). Deloitte (2011) presented a list of further factors which stimulated this trend and motivated the retail companies in Western markets to expand globally.

The trade of intermediate and convenience food products across borders facilitated the development of global procurement strategies. This is what can be called global sourcing. Even though the retailers have always bought products from all over the world, global sourcing has a wider meaning. Lingenfelder (1996) emphasized that global sourcing applied as a strategic option can contribute to the added value, not only by cost reduction but also by value enhancement. This results in quality differentiation and early adaptation to changes in food trends and fashions. When a national retailer converts to a multinational or a global firm, the procurement situation changes considerably. Retail firms also try to reach synergy effects by simultaneously introducing centralized procurement divisions for several countries. It is often observed that the number of employees in the domestic, centralized procurement department is more or less stable, although the number of

countries to be managed and the quantities to be coordinated increase. As a result, retailers take their own suppliers to the foreign countries, because the total number of suppliers should be more or less unchanged for the above-mentioned economic reasons. This also means that the quantity delivered by one supplier increases. Hence, the suppliers must continually increase their level of professionalism and their IT-infrastructure. As a focal company, a retailer must accept responsibility for the quality of the products sold under its own label. Therefore, retailers must alter their conventional supply systems from purchasing on spot markets to using cooperative supply chain networks (Hanf and Kühl, 2005).

Such trends as the internationalization and globalization of economic activities in the last few decades have had a strong impact on the organization and operation of firms. The process of restructuring has brought about new cooperation concepts forming supply chain networks. Besides, due to the tightening of quality standards and the need to work together with "old" suppliers, one of the main consequences of retail internationalization is the establishment of tightly coordinated chain organizations (Hanf et al., 2010). All over the world it is observable that more strictly coordinated food chains are evolving. For example, the world's largest food retailer Wal-Mart is gaining competitive advantages through collaboration with its suppliers. In Russia, the German retailer Metro Group established collaborative business relationships (Hanf and Dautzenberg, 2007).

The described trends indicate that food products are usually not produced in vertically integrated food chains but rather in vertically cooperating networks. Because in the context of retail internationalization strictly coordinated vertical linkages are relevant on the one hand to guarantee the correctness of credence attributes like organic produced, and on the other hand in order to gain cost advantages, such networks are generally of strategic character. They were defined by various authors as "supply chain networks" (SCN) or net-chains (Lazzarini et al., 2001; Hanf and Kühl, 2004).

Overall these examples show that worldwide supply chains evolve in agri-food business that are of non-spot market nature. Instead, such supply chains are rather of hybrid character. This development can be summarized as verticalisation. The use of spot markets apparently became less efficient for coordinating production and processing flows due to higher transaction costs. While in former times transactions could been characterized as being of arm's-length nature, nowadays tighter procurement relationships have evolved. As a result, a trend of vertical coordination appeared which could be referred to as the synchronization of successive stages of production and marketing regarding quantity, quality, and timing of product flows (Martinez, 2002). Supply chain collaboration requires the readiness of the involved enterprises to work with each other openly in order to reach common objectives efficiently. Therefore, firms strive to join in or establish supply chain networks in order to achieve a higher profit, stay innovative and produce goods of higher quality. Therefore, the resulting need to steer and manage such chain organizations, also called supply chain networks, could be viewed as one of the most important trends of retail internationalization. In this context it is obvious that Western retailers export their business models of chain management, both in the sense of enhanced efficiency as well as in the sense of global chain quality concepts.

Each supply chain network usually possesses a focal firm which coordinates the network in a hierarchical style. Additionally, the intensity of the relations within strategic networks is rather high and recurrent interactions are inherent (Burr, 1999). The other network actors are more or less heavily dependent on the focal firm because of (long lasting) explicit or implicit contracts. The level of dependency is usually higher for vertical than for horizontal ties (Wildemann, 1997). Since the focal company is the core element of the supply chain network in the agri-food business, it has also the ability to align the actions of the network

partners and thus the ability to coordinate the network in order to realize the strategic objectives.

It is known that international food retailers and manufacturers are trying to bring their established supplier relationships with them to emerging markets. However, they are forced to start working with local suppliers due to the existing tax and customs regulations, which complicate the import of goods by foreign companies. Therefore, the international companies are forced to use locally produced resources and goods. Because most global players are forced to work with local suppliers, they try to introduce the management approaches which proved to be successful in their home countries in their work with local suppliers (Roberts, 2005). International food retailers and manufacturers expect their suppliers to meet the retailers' global requirements for food quality and safety as well as delivery terms. Since retailers normally act as gatekeepers to the consumers they enhanced their power by increasing their ability to deny manufacturers' and suppliers' access to the shelf. As a result, they developed into the so called 'chain captains' (Gagalyuk and Hanf, 2008). Within a very short period of time they took charge of the whole food chain and were able to say what was on the agenda and what was not. Thus, such international players have been able to gain some power by applying global sourcing strategies and providing interesting new markets (BBE, 2006).

1.2 Problem Statement

As mentioned in the previous section, food retailers and processors with strong brands were able to establish themselves as powerful 'chain captains' responsible for managing the whole supply chain network. Market influence of such companies has been steadily increasing, and their requirement standards to suppliers have become more and more rigid with respect to quality of the goods and to price policy. In the majority of Western markets retailers proved to be more dominant, since they positioned themselves as brand guarantors in the supply chain and made the shift in retail strategy from being a relatively passive assortment builder to the brand developer and manager of the whole chain. Their decision process starts with choosing a product and then the supplier. As a result there has been a shift in power[1] within food marketing channels towards the retailer (Bourlakis, 2001; Fiddis, 1997) which is seen as the main gateway to consumers' and the gate-keeper between producer and consumer (Lang, 2003). The retail chains will sell what the customers need and buy. Suppliers who can deliver goods with high quality on time, reliably and with proper documents are in a good position when retailers choose suppliers.

The actual role that influence strategies play in supply chains and networks has been treated in contrasting ways in the literature. The research topic of the use of influence strategies has been receiving increasing attention lately. However, only a few scientific works have studied the use of influence strategies in the context of supply chain networks in the Russian agri-food business. We have deliberately chosen Russia since many foreign companies have invested in this competitive market in the last few years. As brands are of major importance, many of them imported their chain management concepts from their

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[1] We would like to draw your attention to the fact that a clear distinction should be made between 'market power' as an economic term and 'power' as an ability to perform certain actions in general. According to Iyer and Villas-Boas (2003): "Market power should not be confused with bargaining power in the channel. Market power might be due to factors such as locational convenience, store reputation, and so forth. In contrast, bargaining power represents the ability or skill of a party to bargain for a greater share of the pie." In this thesis we refer to the term 'power' in the sense of an ability or a skill to accomplish specific tasks. More information on this term will follow in the next chapters.

Western European home countries. At the same time it can be observed that Russian manufacturers and retailers are copying these approaches. This creates the particular situation that supply chains and their management should be and are being 'designed' out of strategic thoughts by the brand owners ('chain captains') and cover the whole food chain. With their pyramidal-hierarchical structure, supply chain networks possess a focal company which has the ability to align the actions of the network partners and holds the ability to coordinate the network. Therefore, in the thesis, we put our main focus on the studied company's perspective due to its central position.

Reardon and Berdegué (2006) reported that supermarket chains in developing countries complained about practices of their suppliers' such as: (1) not complying with contracts, selling to brokers who visited the farms at harvest and offered better prices or immediate payment or both; (2) inconsistent quality and volumes; (3) lack of counterpart-investment in supply chain logistics. This seems to be true also for the Russian agri-food business. One of the difficulties which many food retailers and processors experience when entering Russia is the uncooperative behaviour of Russian suppliers (Roberts, 2005). In fact, cooperation between buyers and suppliers is one of the most important issues in the rapidly developing Russian retail market and is crucial for the success of business operations. According to Sheresheva and Tretyak (2004), Russian supply chains were characterized by distrust and the absence of professionalism. Tarnovskaya et al. (2007) described the generally low level of suppliers' compliance with the norms of the code of conduct. Only a few Russian suppliers are able to produce according to the global standards demanded by the retailers, therefore those few which possess such ability are in a very favourable position and dictate their trade conditions and occupy a very powerful position in relationships with retailers. In the long run only those suppliers will remain in the chain, which are able to meet the requirements of retailers and branded processors. Therefore, these relationships need to be seen in the context of power shifts along the supply chain and can be characterized by power asymmetries and mutual dependencies.

Therefore, the ability to influence other supply chain actors distinguishes itself as an effective tool in coordinating and promoting harmonious relationships, solving conflicts, and enhancing performance of the whole network and its members. The biggest advantage of using influence strategies could be its commanding nature, which is perfectly suited for completing specific tasks in supply chain management (SCM). In our view, the use of influence strategies is not less important than the use of trust. Moreover, influence strategies can have even a greater positive and beneficial effect on SCM than other relational constructs do. In this context, the use of influence strategies represents one of the major elements of the SCM. In this regard, an intriguing research question arises of how to distinguish among, and deal with, different effects the influence strategies might have in order to avoid problems and use them as an effective tool for SCM. This question appears to be an important one. Are there any criteria which determine when influence strategies might have a destructive impact and when they are positive and constructive and can be used for good purposes?

Therefore, there is a need to investigate this phenomenon in order to close the existing gap in the literature and to contribute to the overall understanding on the role of influence strategies in supply chains and networks. However, in order to discuss the effects of using influence strategies and their role for SCM, one needs to be specific on the nature and the origins of the mentioned concepts. Accordingly, an important challenge is to find out what role influence strategies play in supply chain networks, how they affect SCM with specific attention to coordination and cooperation, and whether influence strategies can indeed be utilized as a set of tools for promoting the overall supply chain effectiveness.

1.3 Research Aims, Structure and Outline of the Thesis

Taking into account the problem statement explained in the previous chapter and with the intention of finding out how influence strategies could be used as a managerial tool for chain management, the aim of the thesis is defined as follows:

> *to investigate the influence strategies in supply chains and networks and their role for supply chain management in order to work out an overall strategy that enables supply chain managers to select an effective mix of managerial mechanisms for coordinating the whole supply chain network.*

Thus, the working area of the thesis includes Supply Chains and Networks, Influence Strategies, Supply Chain Management and Russian Agri-food Business (Figure 1).

Figure 1. Working area of the thesis
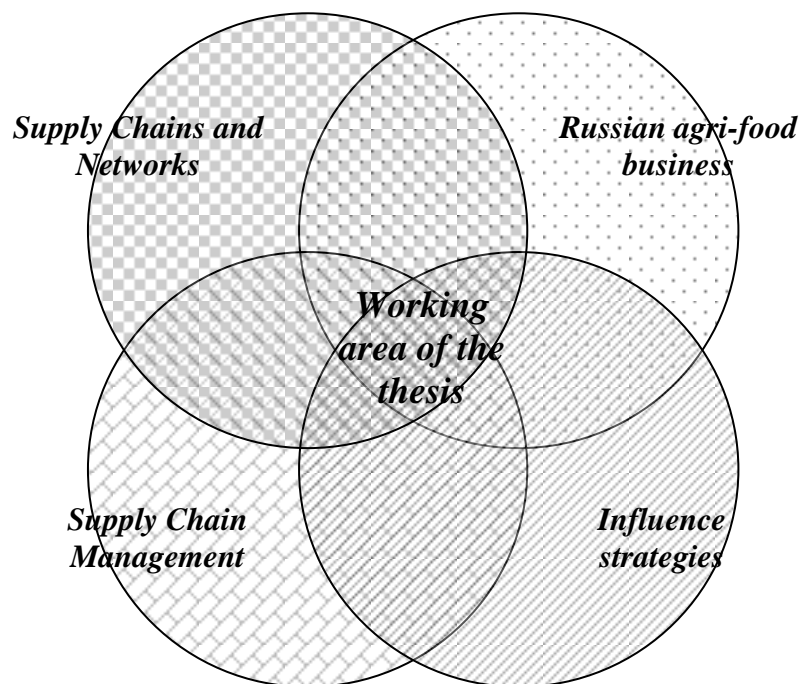
Source: own accomplishment

According to the defined research aim we have developed the following research tasks to allow us to work step by step toward the achievement of our research aim:

- Clarification of the theoretical concepts of networks, supply chains, supply chain networks, supply chain management and influence strategies;
- Investigation of the role of influence strategies for supply chain management from the theoretical point of view;
- Working out a theoretical model and hypotheses on the role of influence strategies for supply chain management and the existence and distribution of power in agri-food supply chain networks;
- Studying the empirical setting of the Russian agri-food business;
- Validation of the theoretical model in the empirical setting of the Russian agri-food business;
- Drawing conclusions and working out implications of the conducted research.

To accomplish the aim of the thesis and to fulfill the proposed research tasks, we proceed according to the following outline. The structure of the thesis can be divided into four general stages: Theoretical background (I), Theory extension (II), Empirical work (III), and Implications of the study (IV) (Figure 2).

Figure 2. Outline of the thesis

Chapter 1. Introduction and Research Aims	**Part I.**
Chapter 2. Influence Strategies and Supply Chains and Networks	Theoretical background
Chapter 3. Conceptual Issues of Supply Chain Management	
Chapter 4. Role of Influence Strategies for Supply Chain Management	**Part II.** Theory extension
Chapter 5. Russian Agri-food Business	**Part III.**
Chapter 6. Empirical Study of Russian Agri-food Business - Part I	Empirical work
Chapter 7. Empirical Study of Russian Agri-food Business - Part II	
Chapter 8. Contributions of the Thesis and Conclusions	**Part IV.** Implications

Source: own accomplishment

At the Theoretical background (I) stage we pursue the following objectives.
Chapter 1. We discuss the recent trends in the agri-food business identifying the importance and the role of influence strategies for supply chains and networks as well as for chain management concepts. We elaborate on the working area of the thesis concerning this role. Finally, we present the structure, outline, research aims and tasks of the thesis.
Chapter 2. We introduce the framework of supply chains and networks and focus on the existence of a focal company, supply chain management and the place of influence strategies in supply chains and networks as well as their role for supply chain management. We address networks as a form of interfirm cooperation in general and review a number of typologies of interfirm networks. We also indicate which types of networks are not in the focus of this thesis. After that we proceed to analyze the concepts of supply chains and supply chain networks and present a thorough review of the existing approaches in the literature. Since supply chain networks possess a focal firm which coordinates a whole network and exercises chain management to achieve goals of the whole network, we also elaborate on this concept and identify this phenomenon from the theoretical point of view. After examining the conceptual issues of supply chains and networks and their management we continue with the review of the literature on influence strategies in supply

chains and networks. We study the phenomena of influence strategies, present common views and definitions as well as classification of influence strategies according to different criteria.

Chapter 3. In addition to the review of the literature on supply chains and networks and influence strategies, we deal with the concept of supply chain management and identify two important areas within this concept: coordination and cooperation. These two areas are also studied from the perspective of existing theoretical concepts. Within cooperation we differentiate among several important areas: strategic transparency, strategic alignment, control of opportunism and general cooperativeness. Within coordination we also differentiate among several areas: operational transparency, synchronization of logistics processes, synchronization of decision-making processes and allocation of tasks. This differentiation is done intentionally, since it is used for further theoretical elaborations on the concepts of cooperation and coordination in the following chapters in order to develop appropriate measurement scales to conduct the model assessment in the empirical part of the thesis.

At the Theory extension (II) stage we elaborate on the formulated research aim and tasks by accomplishing the following steps.

Chapter 4. We work out a theoretical model on the role of influence strategies for supply chain management, taking into account the valuable insights from the theoretical background. We present our view on the relevance of the concept of influence strategies for supply chain management and develop a number of research assumptions about these topics. Additionally we develop a conceptual model showing the hypothetical effects of influence strategies on supply chain management and formulate hypotheses about these effects on coordination and cooperation.

At the Empirical work (III) stage we focus on the following objectives.

Chapter 5. The Russian agri-food business serves as the empirical setting for this thesis. We decided to choose this empirical setting because Russia represents one of the leading growing economies among the post-soviet countries and among all the other transition countries in Central and Eastern Europe (CEE). This country is characterized by an increasingly wide scope of verticalization practices and the formation of supply chain networks, especially in the agri-food business. We continue our research by looking closely at the chosen empirical setting and examining what is available in the literature about recent trends and developments in the Russian agri-food business, including globalization and retail internationalization, vertical coordination and foreign direct investment. We look at the empirical setting through the lenses of the discussed theoretical issues of supply chains and networks and chain management and investigate whether and how the concept of influence strategies is relevant in this setting at all. This part of the research is based on the secondary data and critical evaluation of existing literature.

Chapters 6-7. After building the theoretical framework and examining the empirical setting we continue with an empirical investigation in the context of the Russian agri-food business. This part is based on two Telephone Surveys (A and B) conducted with experts and representatives of companies with foreign direct investments in the Russian agri-food business. The expert interviews were conducted on the basis of the designed survey tools which can be found among the appendices of the thesis. The raised questions correspond with the research assumptions and hypotheses and are specifically designed to test them. We analyse and discuss the results of both surveys based on the content analysis. In addition to the content analysis we also test our developed theoretical model on the effects of influence strategies on cooperation and coordination empirically and verify the formulated hypotheses using the method of Partial Least Squares (PLS) path modeling. In order to accomplish this task we apply SmartPLS software 2.0.1 (Ringle et al., 2005).

Before running the model we describe the PLS technique and present a sound argumentation for why we chose it. Subsequently, we conduct the model assessment and discuss the results. In discussion of the results of model assessment by PLS we intentionally compare the findings with those of the content analysis of Telephone Surveys A and B in order to compare the observed effects and to gain a deeper understanding for them.

At the Implications (IV) stage we summarize the results of the research and proceed according to the following steps.

Chapter 8. We develop implications of our research based on the findings of the study. We draw our conclusions and elaborate on the contribution of the study based on the obtained results of the research. Finally, we address the limitations of the study and identify the projected directions for the future research.

1.4 Summary of Chapter 1

Summarizing the developments described the *Chapter 1* we must admit that market concentration in saturated countries in combination with emerging new markets being influenced by a number of factors has led to several important trends in the agri-food business in recent decades. Retail internationalization gave rise to retail branding and global sourcing and under the growing demand for quality and safety the new forms of tightly coordinated chain organizations such as supply chain networks have emerged. Retail and processing companies have been able to accelerate their dominance on the markets and have gained power as the core element or the focal actor in the whole supply chain network.

The research topic of the role of influence strategies has increasingly been receiving more attention lately and has been treated in contrasting ways in the literature. However, only a few scientific works have studied the use of influence strategies in the context of supply chain networks and their management in the Russian agri-food business. The biggest advantage of using influence strategies could be its commanding nature, which is perfectly suited for completing specific tasks in supply chain management. An important challenge is then to find out what role influence strategies play in supply chain networks, how they affect supply chain management with specific attention to coordination and cooperation, and whether influence strategies can be utilized as a set of tools to promote the overall supply chain effectiveness.

Therefore, the aim of the thesis is to investigate the influence strategies in supply chains and networks and their role for supply chain management in order to work out an overall strategy that enables supply chain managers to select an effective mix of managerial mechanisms for coordinating the whole supply chain network. The Russian agri-food business serves as an empirical setting for conducting this research.

2. Influence Strategies and Supply Chains and Networks

In *Chapter 2* we discuss the theoretical concepts Networks, Supply Chains, Supply Chain Networks and Influence Strategies. We present a critical review of the relevant literature in order to clarify the meaning and to contribute to a better understanding of these terms. We begin by introducing the concept of networks in general and proceed by looking more carefully at the related concepts of supply chains and supply chain networks. We then elaborate on the conceptual issues, role and tasks of a focal company in such networks. Finally, we introduce the concept of influence strategies and demonstrate how it can be integrated into the discussed setting of supply chains and networks.

2.1 Supply Chains and Networks: General Terms

The concept of networks has been used to describe a range of nonmarket, nonhierarchy forms of organizational governance, including, but not limited to, joint ventures, partial equity, licenses, cooperative R&D, consortia, franchises, clans, etc. Networks have been viewed as intermediary organizational forms traversing an internalization continuum, the so-called 'great swollen middle' (Hennart, 1993). Other researchers argued that networks are a new and distinct type of organization form, separate from markets and hierarchies, and require unique theories and research approaches (Grandori, 1997; Jones et al., 1998). According to Powell et al. (1996), networks arise from the social interactions of collective activities of multiple parties.

For Lorenzoni and Baden-Fuller (1995) networks can be thought of as "a higher stage of alliances, for in the strategic center there is a conscious desire to influence and shape the strategies of the partners, and to obtain from partners ideas and influences in return". Some further definitions of networks specify that the actors exchange their influence with the help of interconnections and relations. Thorelli (1986) viewed networks as "arrangements between markets and hierarchies" and "relationships of power and trust through which organizations exchange influence and resources."

Another idea about the fact that a network consists of more than two elements is supported by a number of other authors. For example, Anderson et al. (1994) defined networks "as a set of two or more connected business relationships, in which each exchange relation is between business firms that are conceptualized as collective actors". The essence of this definition is based on the idea of a collective actor and consequently the existence of collective actions. Lazzarini et al. (2001) and Omta et al. (2001) also claimed that they would rather more generally address all questions on inter-organisational relationships of more than two firms. So in general, one can conclude that networks consist of more than two firms.

Another group of authors sees networks as systems creating value. Omta et al. (2001) defined networks "as the total of actors within one industry and/or between related industries, which can potentially work together to add value to customers" and Gulati et al. (2000) described networks as an origin of resources creating inimitable and non-substitutable value.

The examination of these theoretical issues on networks allows us to state that networks can be viewed as systems consisting of more than two elements, which are connected among themselves through linkages and relations of repetitive character through which they exchange influence and resources, create value, and have their own logic.

Let us proceed further by examining the existing classifications of networks. There are different approaches to classification of networks. Burr (1999) uses a typology of networks based on the intensity of relations, the coordination, and the existence of a focal firm and

suggests considering four network types: spontaneous network, self-organizing network, project-oriented network, and strategic network. It should be mentioned that the differentiation and classification of networks can be very complex and one needs to keep in mind that it may not be helpful in understanding the main characteristics of all of them. Therefore, since in our view the concept of strategic networks is the most interesting for understanding the phenomenon of supply chain networks, let us focus more on this specific kind of networks. The strategic network has a broker coordinating the network firm in a hierarchical style. The intensity of the relations within the network is rather high, with inherent recurrent interactions and the network is set for a long term.

Jarillo (1988) defines strategic networks as "long-term, purposeful arrangements among distinct, but related for-profit, organizations that allow those firms in them to gain, or sustain, competitive advantage vis-à-vis their competitors outside the network." According to this view, in strategic networks a hub firm has special relationships with the other members of the network. Those relationships have most of the characteristics of a hierarchical relationship: relatively unstructured tasks, long-term orientation, relatively unspecified contracts, etc. Strategic networks are composed of inter-organisational ties that are enduring and of strategic significance for the firms entering those networks (Gulati et al., 2000). On account of this, they possess a strategically oriented focal company that coordinates the network in a hierarchical way.

According to Santoso et al. (2005) a supply chain is a network of suppliers, manufacturing plants, warehouses, and distribution channels organized to acquire raw materials, convert these raw materials to finished products, and distribute these products to customers. Another definition of a supply chain is provided by Christopher (1998), who claims that a supply chain is "a network of organizations that are involved through upstream and downstream linkages in different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer." Stevens (1989) calls a supply chain "a system whose constituent parts include material suppliers, production facilities, distribution services and customers, linked together via the feed-forward flow of materials and the feed-back of flow of information and financial capital". Typical for agri-food business are supply chains in which there is a single manufacturer and a large number of suppliers of raw materials, where producers supply raw materials to first-handlers (Preckel et al., 2004).

Therefore, supply chains represent networks of supply chain partners consisting of several stages: purchasing, production and distribution; and upstream and downstream flows. The flow of goods has a downstream character, whereas the flow of money and information is upstream, as consumer demands determine the variety of goods they want to buy. Taking this one step further we come closer to the notion of supply chain networks. As mentioned before, after forming supply chains, firms driven by vertical integration necessities tend to build more complicated structures and form supply chain networks.

A broad consensus has emerged among strategy scholars that strictly coordinated chain organizations are of high importance for the organization of supply chains. Such organizations could be either vertically integrated firms or strictly coordinated networks. Vertical (procurement) relationships have always been the favourite empirical domain of theorists of economic organization (Gulati et al., 2005). They elaborate further that such relationships involve exchange between adjacent stages of the value chain, and they occur within firms and between firms. In recent years it was mentioned by various authors that vertical collaborations are being referred to as 'supply chain networks'.

So the interesting question is: where does the supply chain stop being a supply chain and begin to represent a supply chain network? In the concept of supply chain networks, introduced by Harland (1999), she tries to integrate the network and supply chain

approach. She regards an individual firm as a nexus with its own unique network of upstream and downstream partners. Van der Vorst et al. (2005) refers to a supply chain network as to a food supply network and calls it an interconnected system with a large variety of complex relationships such as alliances, horizontal and vertical cooperation, forward and backward integration in supply chains.

Lazzarini et al. (2001) have emphasised the network character of SCM and proposed the analytical integration of SCM and the network theory approach. Under this approach, Lazzarini et al. (2001) introduced the term 'netchain' while Harland (1999) and Nassimbeni (1998) talked about 'supply network'. A netchain is considered to represent a set of networks comprised of horizontal ties between firms within a particular industry or group, such that these networks (or layers) are sequentially arranged based on the vertical ties between firms in different layers. It consists of the following lawyers: suppliers, manufacturers, distributors and consumers (Lazzarini et al., 2001). One can argue about whether a netchain can be regarded as an equivalent of a supply chain or food chain, but there are a certain number of similarities.

In terms of agribusiness, strategic networks are defined as "supply chain networks" (SCN) (Hanf and Kühl, 2004) or "netchains" (Lazzarini et al., 2001). Lazzarini et al. (2001) argues that the relationships between two firms or agents could be arranged as chains (emphasizing vertical ties) or networks (emphasizing horizontal ties). Therefore, supply chains integrated into networks lead us to the concept of supply chain networks. A chain consists of at least three parties; there is at least one party in the middle. This party is usually a buyer of the upstream product or service, while at the same time being a seller to the downstream party. A network is even more complicated because it consists of a chain together with the interdependent relationships surrounding it (Hendrikse, 2003). Supply networks encompass the complexity of networks involving lateral links and two-way exchanges, and include a strategic view of resource acquisition, development and management (Harland et al., 2001). As defined by Hanf et al. (2009b), „a supply chain network involves long-term and recurrent, formal and informal relationships of material, resource, financial and information exchange among more than two participants of the supply chain that are strictly coordinated by the focal firm and aim at fulfilment of certain strategic tasks".

Figure 3. A supply chain network
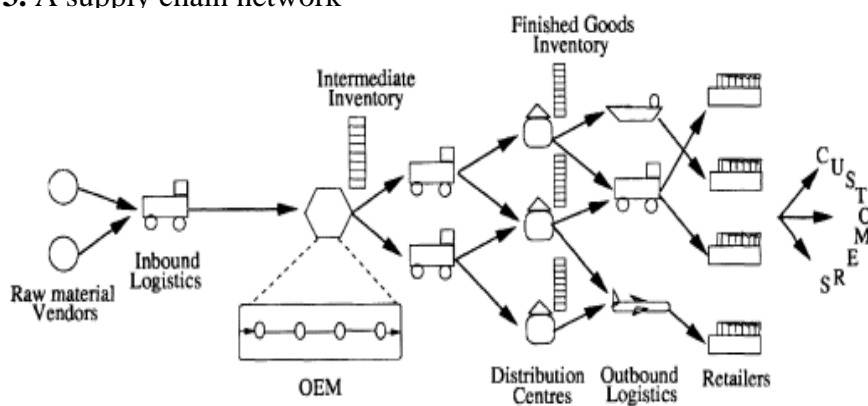
Source: Visvanadham and Raghavan, 2000

Supply chain networks are commonly characterized as firms embedded within a complex network of horizontal (i.e., strategic alliances, joint-ventures) and vertical (buyers and suppliers) relationships (Lazzarini et al., 2001; Omta et al., 2001). The objective of most of

the supply chain networks is to produce higher quality and/or to reach higher efficiency by co-operation rather than by full integration of the supply chain or by market transactions (Hanf and Kühl, 2002). Several scholars refer to supply chain networks as a positive phenomenon. McClellan (2003) claimed that this phenomenon is a win-win arrangement that is likely to provide improved business success for both parties. Agri-food supply chains consist of several subsequent stages and of one or more independent actor(s) at each stage (Hanf and Kühl, 2004).

To draw some conclusions about the above discussed questions, one can say that supply chain networks represent strictly coordinated food systems, consisting of a focal company, which is responsible for coordination and other elements, such as suppliers, consumers and logistic services. According to the above-mentioned definition criteria, one can imagine a network in the form of an aggregate system consisting of edges and knots, and/or material or immaterial ties among the single embedded (integrated) elements, which form its structure and determine its typology.

Collaboration on the level of supply chain networks is claimed to yield significant improvements in multiple performance areas: it is believed to reduce costs, to increase quality, to improve delivery, to augment flexibility, to cut procurement cost and lead time, and to stimulate innovativeness. In order to be able to achieve successful performance of the chain it is necessary to coordinate this whole system, as well facilitate intensive collaboration between enterprises for the improvement of all internal and external material, information and finance flows (Belaya and Hanf, 2011a). These two tasks can be fulfilled by a focal company within successful SCM concepts using its ability to align actions and interests of individual supply chain actors for achieving compliance.

2.2 Role of Focal Company

Several authors have shown that a specific decision mechanism exists in supply chain networks, which is in charge of some collective decisions called authority (Ménard, 2000). Some researchers have discussed this authority in terms of administrating the network through a powerful lead firm (Lorenzoni and Ornati, 1988) or expert head firm that performs some degree of planning and coordination (Inzerilli, 1990). In many networks, this entity is typically a large pre-existing firm which is the central buyer or supplier in the network. It usually disposes over a pool of formal and informal business relationships with other agents and is clearly dominant (Human and Provan, 2000). Möller and Halinen (1999) refer to this entity as 'focal net'. The limits of the network are set according to the focal net's perception about the relevance of other actors (Brito and Roseira, 2005). Jarillo (1988) refers to this entity as 'hub firm', which is the firm that sets up the network, and takes an active role in caring for it. This strategic centre or network captain, as suggested by Campbell and Wilson (1996), has a central role in structuring and managing the network. According to Lorenzoni and Baden-Fuller (1995) the critical dimensions of a strategic centre are to create value for its partners, to act as a leader, rule setter and capability builder, and to simultaneously structure and set up the network strategy. This channel leader plays the key role in setting the overall strategy for the channel and in getting the channel members involved in and committed to the strategy (Kampstra et al., 2006).

The role of this focal company is to create "flows of information certified as legitimate, so that the risk of being wrong is removed from the person who acts in accordance with the information and is laid instead on the legitimators of the communication" (Stinchcombe, 1990). According to Burt's (1992) principles for network building, a focal firm should

maximize the proportion of bridges (i.e., nonredundant contacts) to total contacts in the network. This has relevant implications in the case of a lead firm and its first-order alliance network. In order to increase its potential to generate innovation, the lead firm focuses on the diversity of its direct contacts, which high number increases the probability of network diversity (Capaldo, 2007).

The focal company is expected to manage the whole system in order to realize the strategic objectives. This company is thereby generally the firm that is identified by the consumers as being responsible for the specific food item, e.g., the producer in the case of a producer brand and the retail firm in the pyramidal-hierarchical case of private brand. The other network actors become more or less dependent on the focal company because of (long lasting) explicit or implicit contracts. The focal company should be able to coordinate the information and product flows throughout the whole network. Such managerial co-ordination saves the resources of all participating firms, creating a sustainable win-win situation for all participating network members.

Figure 4. Position of a focal company in a supply chain network
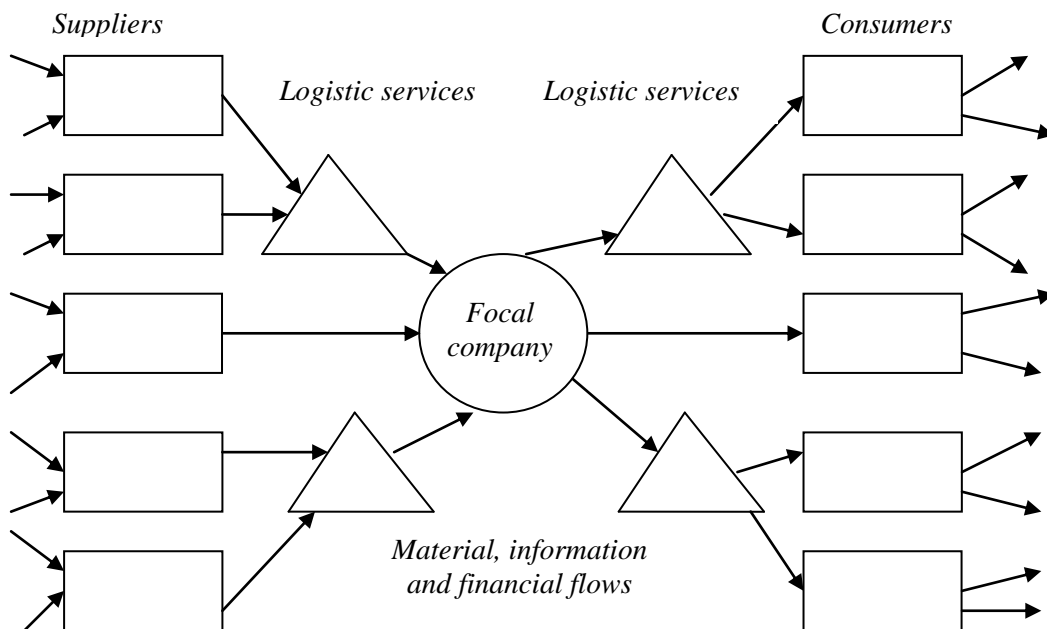
Source: own accomplishment

Therefore, as the focal company is the core element of the supply chain network in the agri-food business (Figure 4), it plays a hub role in the network structure and has the ability to align the actions of the network partners and to coordinate the network in order to reach strategic objectives. Moreover, being the strategic centre, the focal company is responsible for value creation with its suppliers in the network, as well as being a leader, role setter and capacity builder (Lorenzi and Baden-Fuller, 1995). In this way, the focal company has a central role in material and information flows. One important decision the focal company has to take is to decide what to make and what to buy. However, in spite of its central and powerful position in the network structure, the focal company may also be dependent upon the different resources that the suppliers can provide (Gadde and Håkansson 1993).

Aside from the relations between the focal company and its suppliers, there are horizontal bonds between the suppliers. These may interact with each other due to and through the mediation of the focal company. This means that the buying company will hardly be able to unilaterally decide and implement interaction mechanisms amongst its suppliers. The

higher the number of actors involved, the harder it could be to manage those processes, due to their specific and potentially conflicting characteristics and interests (Brito and Roseira, 2005).

The focal company should consider how to structure its supply network in the most efficient way. Gadde and Håkansson (1993) suggest that the focal company can structure its supplier network in two different ways. One way to do it is according to how the suppliers can be organised, and the other is according to the number of suppliers. The focal company can organise the suppliers into systems of suppliers, with suppliers on different tiers depending on their activities and resources. One of the goals with systems of suppliers is that the number of suppliers, which have a direct contact with the focal company, is reduced. Focal firms tend to foster the so called 'multi-client' relationships with their suppliers, with single-client relationships being rare and limited to very small firms.

Focal firms transfer knowledge and expertise to some of their suppliers or help them to acquire new competencies from other sources. These information resources are transferred by using different organizational tools, such as training systems, exchange of human resources between focal firm and suppliers, and diffusion of information systems that force the suppliers to use new managerial tools for design and communication. Suppliers' early involvement in new product creation has been signalled as a practice that enables knowledge transfer and creation among focal organizations and suppliers. Though focal firms are eager to invest in knowledge transfer and creation inside their suppliers, they are ready to dissolve their relationships with such partners not able to fit new requirements. Sometimes focal firms set up 'learning races', giving suppliers goals and awarding prizes (Lorenzoni and Baden-Fuller 1995). Focal companies are usually forced to select out those suppliers not able to improve their delivery times or that are not able to certify the quality of their production. This is done for the sake of the preserving the efficiency of the whole network.

Perhaps the most distinguishing feature of the focal company is its embeddedness in a large set of relationships with other firms and institutions. Relationships are both numerous and varied, involving a large number of transactions in different value-chain activities, and with reference to different parts, components, and operations. The focal firm displays relationships with other organizations and institutions outside the cluster and internationally. These ties are strategically pursued and used by focal firms to create business opportunities, to escape from inertia, and to foster change (Lazerson and Lorenzoni, 1999). According to the network theory the position of a firm in the network is important as it determines the firm's strategic actions and consequently network dynamics (Johanson and Mattasson, 1992). Furthermore, the firms' strategic actions are aimed to influence the position of the firm in the network.

In terms of core competencies, the focal company must be able to create a shared business idea, to invest in and to lead the partners, to support an atmosphere of trust and reciprocity, and develop abilities to select and attract the right partners (Lorenzoni and Baden-Fuller 1995). By a chain strategy and management the focal company is able to perform a centralized coordination of the information and product flows throughout the whole network. Such a managerial coordination saves resources of all participating firms creating a sustainable win-win situation. It should be mentioned that as an important element of cooperation, trust[2] in supply chain relationships deserves a special attention. Nevertheless, as it possesses the ability to align the actions of the network partners, the focal company has the ability to coordinate the network in order to realize the strategic objectives without necessarily investing its resources in building trust.

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[2] More details on the concept of trust and its role and interconnectedness with other relational constructs such as power could be obtained from Belaya et al. (2009a).

Big branded focal companies such as Ehrmann, Campina or Danone have a certain degree of influence on their suppliers. Driven by the interest in the long lasting relationship with this company, suppliers may become extremely dependent on the focal company if they consider concentrating on fewer processors and choose to become dedicated suppliers. Being a dedicated supplier means that the dependence of a supplier on that processor is relatively high. Due to the relative power advantage of the focal actor over a dependent supplier, this situation may appear to be risky and leave the supplier vulnerable to the demands of the more powerful actor (Duffy and Fearne, 2004). However, there are situations in which retailers, which are seen as 'chain captains' and the administrative centres of supply chain networks, may also be at the mercy of other supply-chain members. For example, suppliers seem to have some possible avenues of control over category management decision-making (Lindblom et al., 2007). The focal actor can also be dependent upon the different resources that the suppliers can provide. For example, the phenomenon called 'paradox of power' makes retailers dependent on a small number of large category suppliers who can deliver safe products of consistently high quality on a large scale at competitive prices and who have the potential (and desire) to innovate and add value to commodity-oriented categories like fresh meat (Fearne and Dedman, 2000). In this way powerful retailers and branded processing companies may become more reliant and dependent on their suppliers, which in their turn become the providers of brand integrity. This may result in a less powerful position for focal actors.

Therefore, the focal firm is generally that firm which is identified by the consumers as being responsible for the specific food item, e.g., the producer in the case of a producer brand and the retail firm in the pyramidal-hierarchic case of a private brand. The other network actors could become dependent on the focal company because of the existing long-term contractual obligations. The level of dependency is usually higher for vertical ties than for horizontal ties (Wildemann, 1997). The focal company coordinates the information and product flows throughout the whole network, saving resources of all participating firms. Thus, the focal company has a central role in the network, makes decisions about what to make and what to buy and considers how to structure the network in the most efficient way in order to create a sustainable win-win situation. Due to its central role, the status of a 'chain captain', and managing tasks, the focal company tends to have the ability to say what needs to be done to other participating actors. This situation allows the focal company to consider using a certain set of tools or strategies in order to make its influence over other actors more efficient and in order to ensure the accomplishment of the tasks of SCM within the network. Thus, let us examine the concept of influence strategies in the next section.

2.3 Notion and Classification of Influence Strategies

There is a growing body of literature which examines all kinds of mechanisms and tools to be used in SCM. Some of them include: contracting (Williamson, 1975), identification and embeddedness (Granovetter, 1985; Gulati, 1995; Gulati and Sytch, 2005), joint action and joint problem-solving (Zaheer et al., 1998), flexibility to make adjustments (Bello and Gilliland, 1997), setting prices or quantity discounts (Li et al., 1996), regular meetings, installing information, communication technologies and information sharing (Stank et al., 1999), incentives, sanctions, monitoring, rewards, and punishments (Gulati and Singh, 1998), benefit sharing (Yao and Chiou, 2004).

Among the formal mechanisms named are programming, hierarchy, and feedback, while informal mechanisms may include leadership, norms, culture, shared values and

experience, and trustworthiness, as well as a shared strategy (Gulati et al. 2005). In our view, all of these presented mechanisms represent the various means of exerting influence on other supply chain members. Therefore, such mechanisms could be intentionally used as vehicles to transport the influence strategy of the focal firm.

In view of that, Cartwright (1965) considers influence strategies to be "the methods by which influence may be accomplished" and Dahl (1957) defines them as "a mediating activity by A between A's base and B's response". Heinemann (2000) defines influence strategies as "observable strategic maneuvers of the influencing agent aiming to initiate directed adjustments of the target's knowledge, attitude or over behaviour." Therefore, influence strategies may refer to the structure and the contents of communication of the more dominant actor intended to change behaviours of other actors (Frazier and Rody, 1991); or to the means and methods used to influence another's behaviour and/or decision-making (Frazier and Summers, 1984; Tedeschi et. al., 1973).

Moreover, a group of scholars believes that influence strategies can be regarded as the communication means of power[3] to catalyze the aforementioned interaction process in distribution channels, and these strategies deserve as much conceptual and empirical attention as other issues in the marketing literature (Dwyer and Walker, 1981; Frazier and Summers, 1984, 1986; Frazier et al., 1989). Cromwell and Olson (1975) described influence strategies as 'power processes' which represent the interactional techniques individuals employ in their attempts to gain control in the negotiation or decision-making process. Drawing upon the statement of Stern and Heskett (1969) who said that "power need not imply coercion or use of force; it may be any degree of compulsion from the gentlest suggestion to absolute domination", we arrived at the idea that influence strategies can be viewed as collaboration mechanisms presented in some managerial literature.

Many researchers applied the concept of influence strategies in different theoretical and empirical studies by using various classifications of influence strategies. For example, Frazier and Summers (1984) classified influence strategies into information exchange, recommendations, promises, threats, legalistic strategies and requests (Figure 5).

Figure 5. Classification of influence strategies by Frazier and Summers (1984)
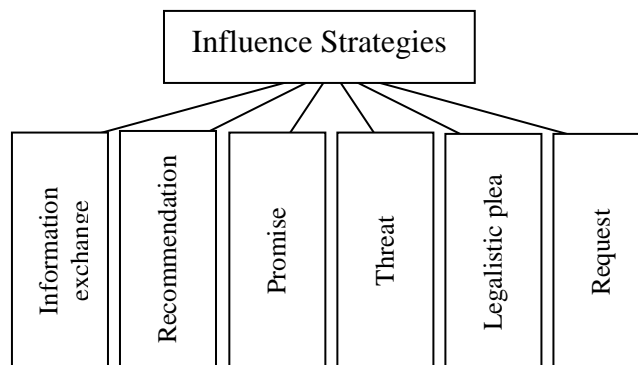
Source: Frazier and Summers (1984)

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[3] We kept the focus of this study on the concept of influence strategies in order to use the findings for further study of this construct as a key element for managerial purposes in the interorganizational context. For a detailed literature review on the theoretical concept of power from a sociological, psychological and managerial perspective, specifying views on power, its sources, and consequences of its use offered by selected theories, please refer to Belaya and Hanf (2009a). Additionally, a detailed literature review of empirical studies on power and influence strategies which examine the effects of these constructs on other phenomena and discuss the strengths and weaknesses of existing conceptualizations, is dealt with in Belaya and Hanf (2009b, 2009c, 2009d and 2009e) and Belaya et al. (2009).

Information exchange is expressed when an influencing party [4] supplies information with no specific action requested or otherwise indicated. Recommendation means that influencing party stresses that specific action is needed to achieve desired outcomes. Promise is observed in the case where an influencing party certifies it will extend a specified reward contingent upon the compliance of the target of influence [5]. Threat means that the influencing party informs the target of influence that failure to comply will result in negative sanctions. A legalistic plea is made when an influencing party contends that the compliance of the target of influence is required by formal agreement. Request means that influencing party requires the target of influence to act without necessarily mentioning the subsequent sanctions.

Frazier and Rody (1991) had a similar classification of influence strategies: request, recommendation, promise, threat, and legalistic plea. For example, French and Raven (1959) and Raven and Kruglanski (1970) used the following classification: coercive, reward, expert, informational, legitimate and referent (Figure 6).

Figure 6. Classification of influence strategies by French and Raven (1959) and Raven and Kruglanski (1970)
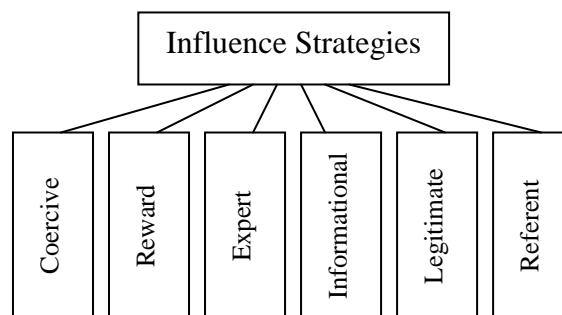
Source: French and Raven (1959) and Raven and Kruglanski (1970)

Coercive influence strategies enable an individual to mediate punishments to others: for example, to dismiss, suspend, or reprimand them, or to make them carry out unpleasant tasks. It is usually based on the expectation of punishments and/or threats and relies on the belief that punishments will be forthcoming or rewards will be withheld unless the requested behaviour is exhibited (French and Raven, 1959; Blau, 1964). In the supply chain network context coercive influence strategies reflect the fear of a network member to be punished if he fails to comply with the requirements of the focal company. However, consistent use of punishments and/or threats may encourage the affected firm to dissolve the trading relationship. Because of this, coercive influence strategies are normally employed when the influenced party's alternatives are limited (Bowersox et al., 1980).

Hunt and Nevin (1974) dichotomized French and Raven's classification into coercive and non-coercive types (Figure 7). While the coercive type of influence strategies arise from punishment and reprimanding efforts, non-coercive types (reward, expert, informational, legitimate and referent) stem from rewards, high quality assistance, exchange of information and expertise, etc. Some other scholars, e.g., Payan and McFarland (2005) also used the classification of influence strategies into coercive and non-coercive (coercive influence strategies: threats, promises; non-coercive influence strategies: rationality, recommendations, information exchange, and requests).

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[4] We use the term 'influencing party' to refer to the focal actor who has the ability to use influence strategies.
[5] We use the term 'target of influence' to refer to the actor which experiences the influence attempts of the influencing party, when the latter uses influence strategies.

Figure 7. Classification of influence strategies by Hunt and Nevin (1974)
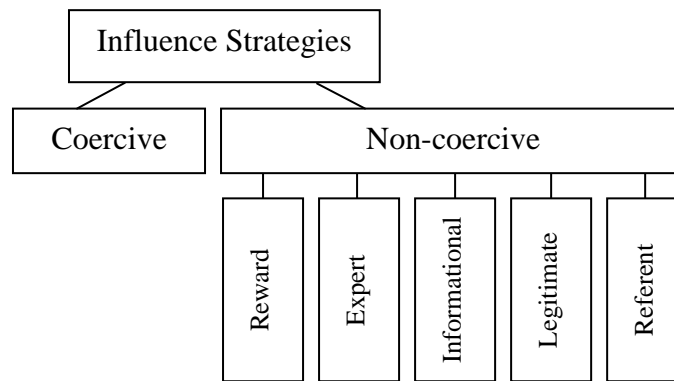
Source: Hunt and Nevin (1974)

Reward influence strategies depend on the ability of the influencing party to offer or mediate rewards to others. It is based on the degree to which the individual can give others a reward of some kind such as recommendations, desired gifts, and increases in pay or responsibility. If a focal company can mediate rewards due to the access to resources which are valuable for other supply chain network actors, then it can make the actors perform in the way the company desires. A firm's ability to use rewards may increase after rewards have actually been employed, because the perceived probability of the promise to deliver is intensified (Cartwright, 1965).

Expert influence strategies are derived from the skills or special knowledge of an individual or a group in a specific subject. This knowledge applies to the restricted area in which the specialist is trained or qualified. The ability to use expert influence strategies depends on the scarcity and the need of these skills for others. It is worth mentioning that this kind of influence strategy may generate a response of trust and credibility. In the case of a supply chain network, the ability of a focal company to use expert influence strategies can be achieved if the network actors perceive or believe that it possesses a special knowledge valuable for them. For example, manufacturers are often expected to have special knowledge about new products and promotion to assist the dealers.

Informational influence strategies stem from the ability to explicate information not previously available and the ability to demonstrate the logic of suggested actions with this information (Raven and Kruglanski, 1970). They believe that even though the difference between expert and informational influence strategies is subtle, the influencing party tends to be well-informed, possess up-to-date information and can, therefore, persuade others. The difference between these two kinds of influence strategies can be observed when the influencing party wanting to apply expert influence strategies may develop credibility and trust through image and respect (for example, a doctor has the ability to use influence strategies over his patients), while the influencing party wanting to apply informational influence strategies may not. This kind of influence strategy does not demand a professional or an expert, but rather requires possession of new and up-to-date information and provides confidence to the influencing party in debating. For example, if a retailer has new information about the consumer demands, then it can persuade suppliers to deliver their products and become a part of a supply chain network.

Legitimate influence strategies stem from internalized values which dictate that there is a legitimate right to influence and an obligation to accept this influence. This kind of influence strategy is based on some kind of a commonly accepted code or standard and usually involves positions and not the personal qualities of individuals. It is also called position power and is usually accompanied by various attributes such as uniforms, offices,

etc. It is based on the belief by one firm that another firm has the right to prescribe behaviour (French and Raven, 1959). For instance, at some food markets a small number of the biggest companies hold a significant share of the market, which allows them to enjoy a powerful position on that market (Glauben and Loy, 2011). A focal company in this case should be recognized in the eyes of the network members as having a right to make specific decisions and expect compliance with regard to these decisions.

Referent influence strategies are based on an individual's ability to be attractive to others and build loyalty and depend on the charisma and interpersonal skills of the influencing party. French and Raven define the source of referent influence strategies as "a feeling of oneness… or a desire for such an identity". Identification can be said to occur when an individual accepts influence because he wants to establish or maintain a satisfying self-defining relationship to another person or a group (Kelman, 1958). It is difficult to identify specific instances of pure referent influence strategies in interfirm relationships, since this kind of influence strategy usually occurs in conjunction with some other kinds of influence strategies and plays a stabilizing role (Beier and Stern, 1969). In the supply chain context this kind of influence strategy is observed when network actors want to join a network.

Later on, other researchers extended this classification by adding further influence strategies to the framework. Stoddard et al. (2000) used 16 influence strategies in his research: indirect influence strategies, direct unmediated strategies, reward and punishment strategies, direct, unweighted strategies, direct, mediated strategies, etc. We were able to delineate even more influence strategies from the existing literature: monitoring, threat, punishment, cooperative norm, legalistic plea, legal contract, appeal, recommendation, request, expert advice, consultation, training, information exchange, debate, persuasion, promise, approval, reward.

We have examined many different classifications of influence strategies and decided to focus on the typology delineated by French and Raven (1959) and Raven and Kruglanski (1970), which includes coercive, legitimate, referent, expert, reward and informational influence strategies. In our view, this classification of influence strategies is the most complete and includes all other mentioned strategies. Depending on the kind of influence the company possesses the set of managerial mechanisms representing certain influence strategies should be adjusted accordingly: coercive influence strategy (monitoring, threat, punishment), legitimate influence strategy (cooperative norm, legalistic plea, legal contract), referent influence strategy (appeal, recommendation, request), expert influence strategy (expert advice, consultation, training), informational influence strategy (information exchange, debate, persuasion), reward influence strategy (promise, approval, reward) (Belaya and Hanf, 2009d).

2.4 Summary of Chapter 2

The essential characteristics of networks mentioned in the scientific literature could be summarized as follows. Networks can be viewed as systems consisting of more than two elements, which are connected among themselves through linkages and relations of repetitive character, through which they exchange resources. Supply chain networks represent strictly coordinated food systems, consisting of a focal company, which is responsible for coordination and other elements, such as suppliers, consumers and logistic services. The objective of supply chain networks is to produce higher quality and/or higher efficiency by cooperation rather than by full integration of the supply chain or by market transactions. In order to be able to achieve successful performance of the chain it is necessary to coordinate it, as well to facilitate intensive collaboration between enterprises.

These two tasks can be fulfilled by a focal company within successful SCM concepts by using its ability to align actions and interests of supply chain actors to achieve compliance. We focus on the classification typology of influence strategies delineated by French and Raven (1959) and Raven and Kruglanski (1970), which includes coercive, legitimate, referent, expert, reward and informational influence strategies. Coercive influence strategies enable an individual to mediate punishments. Reward influence strategies depend on the ability of the influencing party to offer or mediate rewards. Expert influence strategies are derived from the skills or special knowledge. Informational influence strategies stem from the ability to explicate information. Legitimate influence strategies are based on some kind of a commonly accepted and legitimized code or standard. Referent influence strategies are based on an individual's charisma and interpersonal skills. Influence strategies refer to the structure and the contents of communication of the dominant actor who intends to change the behaviours of others and serve, in the context of supply chain networks, as the means of exerting influence on other supply chain members.

3. Conceptual Issues of Supply Chain Management

In *Chapter 3* we continue to elaborate on the theoretical background and conduct a critical literature review of the concept of Supply Chain Management (SCM), challenges and problems which managers have to cope with as they implement the strategy of SCM as well as the two main areas of SCM: cooperation and coordination. We also define the main tasks of cooperation and coordination in more detail.

3.1 Defining Supply Chain Management

One of the first attempts to introduce the term Supply Chain Management (SCM) was undertaken by Oliver and Webber (1992), who presented it as a new concept in logistics. Since then, it is agreed upon that this concept has been gaining a lot of attention in managerial research. Mentzer et al. (2001) mentioned several reasons for the growing popularity of this concept. One of them is the trend of global sourcing and internationalization of supply chains. Others include, but are not limited to, the rising awareness of food quality and safety and pressure put on the food producing companies to fulfil the more complicated requirements of suppliers. The trends of global sourcing as well as retail branding have fostered the establishment of tightly coordinated chain organizations. Thus, the generated need to steer and manage the resulting supply chain networks has emerged. In this context it is obvious that international food operators including retailers and processors started to develop their business models of SCM both in the sense of the enhancement of the efficiency as well as with regard to the establishment of global chain quality concepts.

As Hammer (2006) suggested, the development of the idea of SCM could have been initiated as early as in the year 1975. Before that time the markets were not focused on the consumer demand as such, but were rather more solely oriented towards their own profitability. In fact, other researchers supported the view that at that time each firm was seeking more to make the highest profits and paid little attention to its business partners (Ballou et al. 2000). However, the increasing globalization of supply chains and the necessity to cope with complex tasks of business management put more emphasis on the importance of logistics and, thus, the advent of SCM. The companies started to realize that in order to survive in the environment of uncertainty and sharpened requirements for quality and safety standards of their products, they needed closer relationships with suppliers and other partners. Therefore, business management entered the era of internetwork competition (Lambert and Cooper, 2000).

SCM can be viewed as the integrated creation oriented to process, planning, winding up and supervision of material, informational and financial streams over the whole added value network in cooperation with all involved partners with the purpose of the optimization. SCM strives for intensive collaboration among enterprises for the improvement of all internal and external material, information and financial flows.

With the growing popularity and attractiveness of SCM, the body of the literature studying this concept has also been growing. Many authors have tried to define this term and give it its own footprint. Although our effort to compare the existing views in the literature was well rewarded, we experienced some confusion over the existing approaches and definitions. Mentzer et al. (2001) defines SCM as "…the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole." In our view this definition is one of the most neutral and complete.

The following list of selected key words used in definitions of SCM gives us an idea about the variety of existing definitions (Table 1).

Table 1. Key words used in definitions of supply chain management

Key words used in definitions	Author
flow of materials	Stevens (1989), Ellram and Cooper (1993), Johnston (1995), La Londe (1998), Tyndall et al. (1998), Ballou et al. (2000)
long term relationship	Berry et al. (1994)
activities associated with moving goods	Johnston (1995)
movement and storage of materials	Cooke (1997)
flow of physical goods	La Londe (1998)
strategic partnership	Kotzab and Schnedlitz (1999)
synergistic relationships	Vakharia (2002)
collaborative relationships among supply chain members	Paulraj (2004)
relationships with suppliers and customers	Christopher (2005)
coordination and collaboration with channel partners	Council of Supply Chain Management Professionals

Source: own accomplishment

In order to be able to deal with this variety of concepts we decided to categorize them. The idea to do so, though not new, is probably unavoidable when dealing with this subject. For example, Tan (2001) classified the existing views on SCM into two perspectives: (1) purchasing and supply perspective and (2) transportation and logistics perspective. This classification is quite helpful and seems even quite reasonable. The mere observation of the key words used in definitions of SCM allows us to divide the whole literature into two similar categories: (1) literature dealing with the task of managing flows of materials and (2) literature adding to the management of business processes a strategic character. The first group sees the primary element of SCM in the management of the flow of materials (Stevens, 1989; Johnston, 1995), movement and storage of materials (Cooke, 1997) or flow of physical goods (La Londe, 1998). There are many more such definitions which all sound somewhat similar and limit the view on SCM and logistics activities (Tan et al., 1998). In fact, the physical distribution of goods and coordination of material flows is an important task of the logistics process. This task is essential for the overall organizational performance (Lewis and Talalayevsky, 1997).

However, some researchers doubt that this task alone is a sufficient prerequisite for implementing a successful SCM. In spite of the close connection of SCM to logistics, this apparently means more than just controlling the physical flow of goods. Ayers (2000) points out that SCM encompasses more than the physical movement of goods from 'earth to earth'. According to this view, SCM deals with more than just logistical problems, but rather, due its strategic feature, it deals with more significant issues of strategic management. It seems that this new group of authors views SCM as a concept encompassing not only the activities and processes of sourcing and distribution of materials and goods from the manufacturers to the end users, but also adds to it a strategic character. According to New and Payne (1995) SCM has its roots in logistics which is an important function of business; moreover, SCM has evolved into strategic supply chain management. This idea is also supported by Cooper et al. (1997) who state that SCM not only includes managing logistics processes, but also much more additional multiple business processes. To add more certainty to this common view, Liviu and Emil (2008)

state that SCM is a new paradigm which cannot be put at the same level as logistics, since it has a strategic feature in it.

Based on this argumentation one can indeed identify the second thematic category of definitions which differs from the first in the way that it includes some further important elements of the concept of SCM. These elements tend to describe the activities and processes of SCM in a new light of strategic and long-term orientation within supply chain relationships and partnerships towards business partners: long term relationship (Berry et al., 1994), strategic partnership (Kotzab and Schnedlitz, 1999), synergistic relationships (Vakharia, 2002), collaborative relationships among supply chain members (Chen and Paulraj, 2004), relationships with suppliers and customers (Christopher, 2005), coordination and collaboration with channel partners (Council of Supply Chain Management Professionals).

According to Lambert and Cooper (2000) SCM consists of several different business processes implemented across the supply chain through: customer relationship management, customer service management; demand management; order fulfilment; manufacturing flow management; procurement; product development and commercialization, as well as returns. In order to carry out these processes and allow the collaboration of chain partners, certain SCM strategies and practices are used which have specific guidelines for the implementation of SCM ideas and principles. Some of the best known tools include Efficient Consumer Response (ECR), Vendor Managed Inventory (VMI), Category Management (CM), Collaborative Planning Forecasting and Replenishment (CPFR).

In general, most of the recent literature on SCM addresses the strategic perspective of supply chain relationships. In the case of SCM the emphasis is put on developing long-term strategic partnerships in such a way that all the participating actors would benefit. This is the main difference to classical transportation and logistics management. This change from traditional the logistics orientation seeking benefits for a single company based on short-term cost-effective relationships is quite important for understanding the basic idea of SCM. This concept has evolved from a need to aid different supply chain actors to cope with uncertainty and complexity of the marketplace. One of the most distinctive features of SCM is its orientation to the whole supply chain, consisting of many independent companies, as if it were a single entity or virtual organization. It then allows the different business processes to be managed in an efficient and effective way for the whole supply chain in order to achieve corporate performance. Therefore, SCM can be seen as a strategic tool for managing the whole supply chain.

3.2 Challenges and Tasks of Supply Chain Management

There are many challenges and problems with which managers have to cope with on their way of implementing the strategy of SCM. Simchi-Levi et al. (2000) named two important reasons for these existing difficulties: (1) the heterogeneity of supply chain members and (2) the dynamics of the whole system. Since members of the supply chain are different from one another in many ways (resources, objectives, capabilities, etc.), the conflicts are inevitable. Also, changing consumer requirements always create changing tasks and objectives for supply chains, which add complexity to the management of chain activities. In this context, the task of SCM is to solve the problems of two domains: cooperation and coordination. Therefore, the biggest challenge for chain management concepts is to simultaneously align the interests of the involved partners and their actions (Hanf and Dautzenberg, 2006; Gagalyuk and Hanf, 2010).

In the context of SCM the terms cooperation, coordination, and collaboration are often used interchangeably, which creates a certain degree of ambiguity (Hammer, 2006). In our view this is a tremendous mistake. Payan (2007) clarifies the matter somewhat in his examination of the two conceptual domains of cooperation and coordination. According to the results of the study, cooperation is the orientation of one firm toward working with another organization, whereas coordination refers to joint activities. In terms of SCM, Yeo and Ning (2002) saw two important drivers: a coordinated procurement process in the whole chain and a collaborative attitude among all supply chain members. Both of these tasks (cooperation and coordination) are also mentioned in the definition of SCM offered by the Council of Supply Chain Management Professionals: SCM "… includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers." Gulati et al. (2005) called cooperation – the alignment of interests - and coordination – the alignment of actions – "two sides of the same coin."

Therefore, both aspects have to be integrated into chain management concepts. The focal company that wishes to construct a strategic chain management must work out a collective strategy that addresses cooperation aspects (partnering strategy) as well as coordination aspects (supply chain management strategy) (Hanf and Dautzenberg, 2006; Hanf et al., 2009b) (Figure 8).

Figure 8. Theoretical framework of supply chain network management
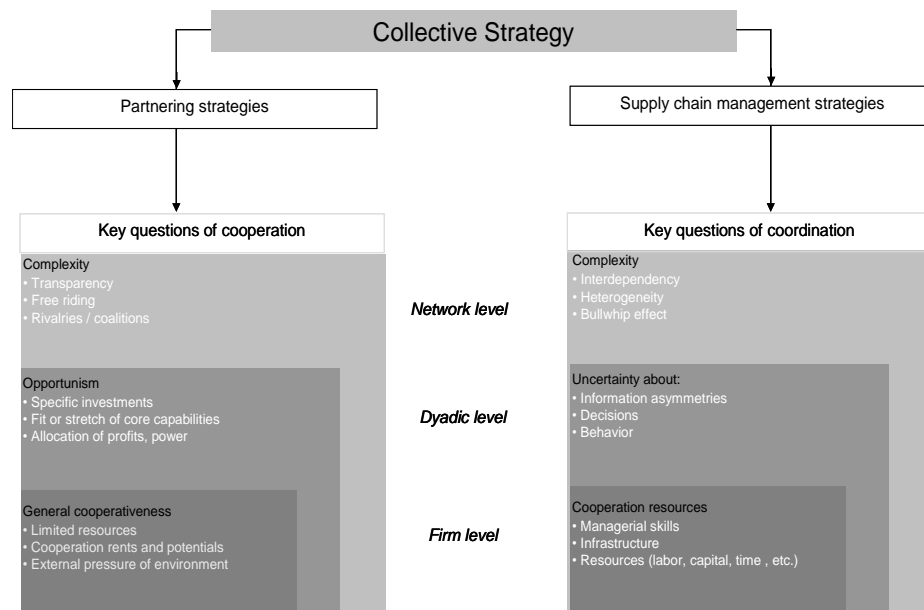
Source: Hanf and Dautzenberg (2006)

Mentzer et al. (2000) identified conditions under which supply chain actors pursue strategic or operational partnership. Strategic partnering is defined as an on-going, long-term interfirm relationship for achieving strategic goals, which delivers value to customers and profitability to partners, whereas operational partnering is a short-term relationship for obtaining parity with competitors. Such partnering aims at improving or dramatically altering a company's competitive position through the development of new products, technologies, and markets (Webster 1992). Strategic partnering incurs implementation costs with an aim of obtaining a superior position over the competition and the investment in such assets may be difficult to recover.

Since operational partnering requires less time, effort and specific investments, it may be more appropriate to apply this in order to succeed under specific circumstances. Operational partnering strategies seek to improve operational efficiency and effectiveness, especially by reducing transaction costs. Such orientation is manifested in employing loose contracts containing rather general information on price, quantity, and quality. Operational partnership involves shorter time spans and less organizational resources, and therefore is much easier to implement (and reverse) than strategic partnership (Hanf and Pieniadz, 2007). While managing supply chains, focal actors have to make a trade-off. In case they strive to achieve only parity with competitors, they need to focus on coordination issues without the elements of building cooperation relationships. However, if they pursue long term, strategic goals that lead to long-term competitive advantage, they have to invest much time and effort to maintain higher levels of cooperation (Hanf and Hanf, 2007).

Thus, the main two areas of interest when talking about SCM are cooperation and coordination. Even though both cooperation and coordination are equally important most often they are researched separately. Whereas cooperation addresses the problem of aligning the individual interests of the network actors, coordination problems refer to problems which accrue due to problems of aligning the individual actions of the network participants. In order to be able to achieve successful performance of the chain it is necessary to coordinate this whole system, as well as to facilitate intensive collaboration between enterprises for the improvement of all internal and external material, information and finance flows. These two tasks can be fulfilled within successful SCM concepts. Since both aspects address two different problems, different solution mechanisms have to be offered. The challenge for the focal firm is to solve both cooperation and coordination problems, while pursuing the partnering strategy which best fits its overall network aims and performance (competitive parity or competitive advantage). In the following sections we distinguish between these two fundamental domains of SCM, which are by no means interchangeable.

3.2.1 Cooperation as the alignment of interests

Many authors agree that cooperation among supply chain members is a necessary precondition for effective SCM (Ellram and Cooper 1990; Tyndall et al. 1998). Rosenberg and Stern (1970) emphasized that cooperation offers an advantage to all the cooperation partners compared to operating by oneself in isolation. Though the term "cooperation" is often used in everyday situations with no specific meaning (Axelrod, 1984), it is generally defined as acting or working together for a shared purpose or toward a common goal or to the same end (Cambridge Dictionaries Online). Many scientists defined cooperation as the joint striving toward a common object or goal (Stern and Reve, 1980; Day and Klein, 1987). According to Taylor-Powell et al. (1998) cooperation is seen as a process where parties with similar interests plan together, negotiate mutual roles and share resources to achieve joint goals but maintain separate identities. Therefore, the cooperation generally starts when the two parties begin to pursue something common and stop being indifferent and just existing parallel to each other. According to Borys and Jemison (1989) interfirm cooperation exists when two or more otherwise sovereign organizations "act in concert to pursue mutual gain." While many researchers defined cooperation as working together for a common goal or shared purpose, Quiett (2002) stated that cooperation represents a concept of "little more than toleration of each other."

The definition of cooperation offered by Levine and White (1961) is different: "any voluntary activity between two organizations or more, which has consequences, actual or

anticipated, for the realization of their respective goals or objectives." Spekman et al. (1998) believed that cooperation refers to a rudimentary information exchange and is not a sufficient condition for managing supply chain relationships. In any case a mutually positive attitude is needed in order for cooperation to start (Hammer, 2006). Altogether one can assume that cooperation refers more to the attitude and motivation of chain members than to the act of working together as such. Cooperation represents a point of departure from short-term spot-market operations towards bilateral and multilateral exchange.

Problems of cooperation arise from conflicts of interest. For the supply chain to work more efficiently, all parties involved - from raw material suppliers to consumers and every touch-point in between - will need to work more collaboratively and invest in technology that enables them to more easily share accurate product information. Collaboration proves to be important since, as Cooper et al. (1997) formulated, sub-optimization occurs when each organization in the supply chain attempts to optimize its own results rather than integrate its goals and activities with other organizations to optimize the results of the whole chain. Successfully formulating the appropriate strategy in a particular customer/supplier situation implies that all entities in the chain must work together, where financially independent entities try to get the dependent parts of the chain to 'play together', i.e., ensuring that the entities in a chain interact successfully to provide the necessary coordinated outputs (Kampstra et al., 2006).

Driven by self-interest, partners often behave opportunistically (Camerer and Knez, 1996, 1997; Heath and Staudenmayer, 2000). Since cooperation is not always purely voluntary, powerful retailers have a major impact on how collaboration is practiced along the chain. Some supply chain actors may be forced to participate; others are not fully supportive of the idea to cooperate or desire more influence or support in the collaboration process. Cooperation problems can be resolved by aligning interests through formal mechanisms such as contracting (where possible) (Williamson, 1975). Informal mechanisms such as identification and embeddedness may also serve to align interests (Granovetter, 1985; Gulati, 1995; Gulati and Sytch, 2005). Given the dynamics of the environment and the shared decision-making roles of the parties, joint action, comprising joint problem solving and joint planning (Zaheer et al., 1998), as well as the flexibility to make adjustments (Bello and Gilliland, 1997) are essential to achieve success. Joint problem solving is necessary to resolve disagreements that emerge in the process of maintaining the relationship, even when planning was done at the outset (Claro et al., 2004). Joint problem solving is also necessary for conflict resolution and joint planning helps to achieve mutual understanding in the network. One can say that collaboration on the level of supply chain networks is expected to yield significant improvements in multiple performance areas: it is believed to reduce costs, to increase quality, to improve delivery, to augment flexibility, to cut procurement cost and lead time, and to stimulate innovativeness.

The review of the literature allowed us to define the following main tasks of cooperation: strategy transparency (Hofstede, 2003), strategic alignment (Williams, 2001; McEvily et al., 2003), control of opportunism (Ghoshal and Moran, 1996; Yaqub, 2009) and general cooperativeness (Ghoshal and Moran, 1996; Lawrence and Lorsch, 1967). Let us explain this conceptual classification in more detail.

Strategic transparency
In order for the firms joining the supply chain network to know whether their goals are similar to the goals or strategies of other members, a certain level of transparency is required so that they can judge the similarity of their goals with those of their partners. In everyday understanding, transparency means clearness and implies honesty and openness (Jensen, 2001; Hofstede et al., 2004) and implies the process of gaining information about

the environment in order to prepare certain actions (Karg, 1990). Hofstede (2003) emphasized the differentiation between operational and strategy transparency and defines strategy transparency as reciprocal information flows on future-oriented perspectives. Strategy transparency looks into the future and involves sharing not only operational, but also strategic information. Therefore, we identify strategy transparency as one of the most important elements and tasks of achieving the cooperation among the supply chain members. Only when the goals and objectives are clearly defined and presented in a transparent way to the partners can the process of cooperation really start and common goals and gains from the potential process of cooperation be identified and pursued.

Strategic alignment
According to Spekman et al. (1999) the misalignment of perceptions, goals and objectives of supply chain actors within a network could be identified as the weakest link. Therefore, though the firms do maintain separate and unique identities, they still need to have commonly defined strategies and goals which correspond with the overall goals of the network. Achievement of similarities in, and unification of goals, values and interests of in-group members is necessary to start the process of cooperation (Williams, 2001; McEvily et al., 2003). Though each member of the chain pursues individual strategies and aims, they should still be adjusted to those of the whole supply chain network in order to have a mutual objective. No cooperation can take place unless the strategies of partners are aligned. In fact, by adjusting the strategic orientation each member of the chain gets a chance to benefit from profit-making opportunities which it cannot create alone. Formulating the common objective is also necessary for supply chain partners in order to avoid redundancy and overlapping. Thus, the firm's strategy should be in line with overall the collective strategy of the network, creating a strategic fit (Bresser, 1988).
Fortuin and Omta (2007) viewed strategic alignment as the core process of finding the right balance between the relevant contingencies in the business environment (external fit) and the firm's internal resources, competencies and capabilities (internal fit). Many authors agreed that the alignment of strategies and goals of partners and maintaining the consistent linkage between the firm's strategy in the internal as well as in the external context is necessary for superior performance (Lemak and Arunthanes, 1997; Lukas et al., 2001). Chopra and Van Mieghem (2000) recognized that in order to satisfy customer needs the supply chains need to create a strategic fit between the desired strategic position and existing capabilities of all members. Therefore, strategic alignment or "fit" is a necessary precondition for achievement of the overall cooperation.

Control of opportunism
The cooperation in supply chains is often threatened by conflicts and the opportunistic behaviour of the members (Gerlach et al., 2004). Since problems of cooperation arise from conflicts of interest, there is also a risk for opportunistic behaviour. Some participants, motivated by the private benefits, may fail to recognize the collectively beneficial outcome. Opportunism includes a pursuit of self-interest with guile (Willaimson, 1985) and unfortunately partners driven by self-interest often behave opportunistically (Camerer and Knez, 1996, 1997; Heath and Staudenmayer, 2000). According to Brown et al. (2000) opportunism can take place before actual formation of a relationship (ex-ante opportunism) or after the relationship has been launched (ex-post opportunism). In any case opportunistic behaviour in all of its forms is stated to negatively impact the relationship or even paralyze the formation of relationship and ultimately destroy the spirit of cooperation. Therefore, it is very important to certify that the opportunism is under control in the network. Focal actors controlling the supply chain are required to design incentives and

control mechanisms to incite the agents to follow the necessary behaviour, or, if necessary, to dissuade them from adopting behaviour that is opposed to the goals of the whole network (Brousseau and Fares, 2000). Prevention of violation of rules, withholding or distorting information and thus, safeguarding against the other members taking unfair advantage of the relationship (Ghoshal and Moran, 1996; Yaqub, 2009) is in our view one of the main elements of efficient functioning of the cooperation process.

General cooperativeness
Cooperation within the supply chain network is based on the individual motivation of its actors. However, after the common goals have been agreed upon, the process of working together should be motivated by something more. If there is no strong motivation serving as a glue to hold two pieces together, the cooperation might fail. The problem of motivation can be resolved by aligning interests through formal or informal mechanisms, cooperation between partners can arise when there are appropriate incentives (formal and informal) (Gulati et al., 2005). As stated by Gupta and Govindarajan (1986) the use of bonuses related to material rewards or profits can create incentives for cooperative behaviour. Some of the formal mechanisms or incentives for motivation may include, but are not limited to, contracting (where possible) (Williamson, 1975), common ownership of assets (Grossman and Hart, 1986; Hart, 1995), monitoring, sanctions (Williamson, 1985), the prospect of future interactions (Baker et al., 2002). An attractiveness of the distribution of costs and benefits, cooperational rents and potentials should be perceived from the exchange (Molm et al., 2000), also an agreement guaranteeing that the benefits will be delivered (Ghoshal and Moran, 1996) should be reached.
Informal incentives could also be used to align interests of cooperating partners and increase their motivation. In addition to such mechanisms as identification and embeddedness (Granovetter, 1985, Gulati and Sytch, 2005) other informal incentives could also be used. For example, approval is considered to be a powerful motivation device, since receiving social approval from peers is one of value-oriented actors' goals (Lazega and Pattison, 1999). The theory of social exchange addresses the impact of social approval incentives on behaviour (Homans, 1961; Blau, 1964). It is argued that the possibility of exchanging pecuniary rewards for social approval can enforce cooperation in many social dilemmas. Thus, there seems to be a strong connection between approval and willingness to cooperate. Since approval serves as the "go" or "no-go" signal and initiates the collaborative effort, without the approval of the collaboration leader there is no collaboration (Kampstra et al., 2006). Therefore, the necessary condition of successful cooperative partnership is a 'cooperative spirit of mutual interest' (Gruen and Shah, 2000) which is reflected in general cooperativeness of the actor.

3.2.2 Coordination as the alignment of actions

Solving problems of cooperation, however, does not automatically help to achieve coordination (Gulati and Singh, 1998). It is necessary to direct and coordinate supply chain relevant activities throughout the whole network, since a supply chain network requires a great deal of coordination among the partners and these can only be efficiently aligned with a sophisticated management concept (Bogaschewsky, 1995). Malone and Crowston (1994) defined coordination as an act of managing interdependencies between activities performed to achieve a goal. Simatupang et al. (2002) viewed coordination as an act of properly combining a number of objects for the achievement of the chain goal and offered a taxonomy of coordination modes consisting of logistics synchronization, incentive

alignment, information sharing and collective learning. Compared to cooperation, coordination indicates an interactive, joint decision making process, where separate entities influence each other's decisions more directly; and is defined as the act of making arrangements for a purpose or making things working together. Cooper et al. 1997 expressed the view that SCM involves "some level of coordination of activities and processes within and between organizations in the supply chain that extend beyond logistics." There are always some problems which hinder effective coordination in a supply chain. Chopra and Meindl (2001) mentioned five different categories of obstacles: incentive obstacles, information processing obstacles, operational obstacles, pricing obstacles and behavioural obstacles.

According to Ramdas and Spekman (2000) the consequences of lack of coordination could include inaccurate forecasts, low capacity utilization, excessive inventory, inadequate customer service, inventory turns as well as low quality, and as a result, low customer satisfaction. Eventually, the lack of coordination might lead to poor performance of the whole supply chain (Arshinder et al., 2008). Given the perishable nature of agri-food products, high rotation and high spatial dispersion of production and commercial processes, there is an increasing need for high levels of coordination in order to supply innovative, high quality products compliant with stricter food safety (public and private) requirements. This would not be possible through simple spot market transactions. Only a close coordination between the producers and all other actors in the chain can generate the product demanded by the final consumer (Peterson et al., 2001). Focal actors controlling the supply chain are required to design incentives and control mechanisms to incite the agents to follow the necessary behaviour, or, on the contrary, to dissuade them from adopting behaviour that is opposed to the goals of the whole network (Brousseau and Fares, 2000). Therefore, special effort should be put on solving the problems and tasks of coordination among actors, since it represents the top success factor for SCM.

Whereas cooperation problems are rooted in motivation, coordination problems arise due to the limitations of participating actors that hinder them from possessing comprehensive knowledge of how others will behave in situations of interdependence. Problems of coordination emerge due to the lack of shared and accurate knowledge about the decision rules that others are likely to use and how one's own actions are interdependent with those of others (Geanakoplos, 1992; Milgrom and Roberts, 1992). Coordination problems also arise due to the difficulties of aligning actions of individual members of the chain and in situations in which one does not know which decision aligns best with other decisions in the chain or network. Even after the interests and strategies of the actors have been aligned the problems of coordination may still remain. This is due to the fact that using different incentives, the core task of achieving cooperation through motivation can be successfully fulfilled, leaving the problems of aligning actions without attention. Kearney (1998) argued at the heart of the process of coordination is an attempt to align procurement structures with organizational structures.

Various solutions for coordination problems like setting prices or quantities (income rights), organization/centralization (decision rights), regular meetings, installing information and communication technologies have been formulated in a two-party context. However, such solutions as incentives, sanctions, monitoring, rewards, and punishments are not sufficient to achieve coordination (Gulati and Singh, 1998). In the case of coordination problems, solution mechanisms - formal and informal - have to aim to enhance shared and accurate knowledge about the decision rules that others are likely to use and how one's own actions are interdependent with those of the others (Gulati et al. 2005). Formal mechanisms include programming, hierarchy, and feedback while informal mechanisms are leadership, norms, culture, shared values and experience, and trust

worthiness as well as a shared strategy. Especially, collective strategies can be used to forecast unpredictable behaviour by the other network firms. Additionally, collective strategies can also be used to overcome coordination difficulties arising from interdependency among the network partners.

The review of the literature allowed us to define the following main tasks of coordination: operational transparency (Meijer and Hofstede, 2003; Theuvsen, 2004), synchronization of logistics processes (Sahin and Robinson, 2002; Simatupang et al., 2002), synchronization of decision-making processes (Simchi-Levi et al., 1999; Hammer, 2006) and allocation of tasks (Gulati and Singh, 1998; Sobrero and Roberts, 2001). In the next step we explain these matters in more detail.

Operational transparency
Due to asymmetric distribution of information in the supply chain the actions of individual members are often uncoordinated. In fact, the so-called 'bullwhip effect' is seen as a typical symptom of a poorly coordinated supply chain. It is recommended to improve the sharing of information in order to match the processes and activities of different members. For example, if the retailer has information of the expected end-customer demand, it should share this information with manufacturers in order to allow for production volume adjustments. The problem is that some members of the chain view specific information as private and unwillingly share it with others (Simatupang and Sridharan, 2002). Another problem with information sharing and operational transparency in the chain is that some information is so complex that it could be difficult to articulate it in such a way that the partners really grasp it. It is necessary to use emerging information technologies in order to be able to fulfil this task accurately (e.g., using the same software as the partner, offering training courses for less informed partners).

The experimental economics literature illustrates that coordination attempts tend to fail in situations with insufficient information about how others will act or behave (Camerer and Knez, 1997; Gulati et al., 1994; Knez and Camerer, 2000). Therefore, the predictability of other's actions as well as comprehensive knowledge of how others will behave in situations of interdependence, and about how actions are interdependent are necessary preconditions for the successful coordination in supply chains. The necessity to create knowledge about others' actions and interdependence of actions has been mentioned by many authors (March and Simon, 1958; Thompson, 1967). Since chain and network parties are regularly confronted with exceptional or unclear situations, in which the desirable course of action is not immediately clear from the perspective of the whole chain or network, the need for an overall operations transparency is very great.

Operations transparency involves information sharing throughout the food chain in order to coordinate operative business activities (Meijer and Hofstede, 2003; Theuvsen, 2004). As a result of operations transparency and imperfect coordination some inventory costs might arise which could be avoided if all decision-makers were well informed (Emery 1969). Therefore, since the use of operations transparency may help supply chain partners to signal exceptional circumstances in advance (Hofstede, 2003), it may serve to enhance the predictability of other's actions and to know more about how actions are interdependent.

Synchronization of logistics processes
The focus of coordination is also on operational linkages in a supply chain. These operational linkages concern synchronising of logistics processes, which is also called the physical flow coordination (Sahin and Robinson, 2002; Simatupang et al., 2002), and deal with the coordination of the flow of products or services and the logistics processes. The synchronisation of logistics processes is a necessary precondition for coordinating the

delivery of products and services in order to fulfil customer needs (Fisher, 1997). If warehouse locations and capacities, production levels for each product, and transportation flows are not organized in a proper way, it is not possible to match customer demand and inventories. As a result, the whole supply chain cannot work cost-efficiently and reach the maximum profitability. In fact, errors in ordering and delays in deliveries disrupt chain performance (Lambert et al., 1998). Therefore the challenge consists in focusing on coordination of key logistics activities in such a way that the systems are adjusted within the supply chain. Only then it is possible to provide real value to the customer under the conditions of rapidly changing markets.

Synchronization of decision-making processes
Unlike cooperation, coordination indicates an interactive, joint decision-making process, where separate entities influence each others' decisions (Hammer, 2006). Synchronization of decision-making processes is necessary for assortment planning, joint forecasting, joint inventory management and replenishment (Simchi-Levi et al., 1999). A supply chain is fully coordinated when all decisions are aligned. Coordination problems are situations in which one does not know which decision aligns best with other decisions in the chain or network. Even when information about how others will behave is available, the performance of the supply chain can be affected when decision-makers do not synchronise their decisions but rather optimize their individual objective functions. An example is given by Spengler (1950): a retailer does not consider the supplier's profit margin when setting his order quantity, so he orders too little of the product for system optimization. Therefore, various solutions for this coordination problem could be formulated, like setting prices or quantities (income rights), organization/centralization (decision rights), regular meetings, installing information and communication technologies, mutual adjustment of decision-making systems used in different network members (Thompson, 1967; Van de Ven and Delbecq, 1974).

Allocation of tasks
According to Faraj and Xiao (2006), at its core coordination is about the integration of organizational work under conditions of task interdependence and uncertainty. Van de Ven et al. (1976) viewed coordination in the light of integrating or linking together different parts of an organization in order to accomplish a collective set of tasks. In their view the allocation of tasks is one of the main preconditions of achieving successful coordination and performance of the whole organization. A number of other researchers voiced the opinion that coordination involves allocation of tasks among individuals in order to enable ongoing adaptation and mutual adjustment between them as the tasks are executed (Thompson, 1967; Gulati and Singh, 1998; Sobrero and Roberts, 2001). The division and allocation of tasks to different (specialized) units as well as the activities to achieve unity of effort among them are also dealt with in organization theory (Thompson, 1967; Lawrence and Lorsch, 1967). One of the key principles involves the reduction of task interdependence between different units in order to avoid any systemic consequences of change. Due to the fact that task interdependence is very often unavoidable since one unit's task depends on the input of another unit, the work of different units and teams has major influence of the results of the task accomplishment among them. Therefore, the knowledge about task allocation is necessary in order to allow for a solid coordination within an organisation. The allocation of tasks in vertical relationships refers first of all to the division of labour across the value chain and the ongoing pattern of interactions between upstream and downstream activities (Bensaou and Venkatraman, 1995; Gulati and Singh, 1998). Galbraith (1977) presented a concept of task uncertainty, which he defines as the

absence of information or having information that is inadequate for performing the task. In order to ensure the overall chain performance each member of the chain should avoid role conflict by performing specific assigned tasks. Without effective task allocation between the teams, interdependencies might produce mistakes causing coordination problems. Therefore, task ambiguity should be reduced in order for each actor to know what needs to be done.

3.3 Summary of Chapter 3

The literature on SCM can be divided into two categories: (1) literature dealing with the task of managing flows of materials and (2) literature adding to the management of business processes a strategic character. The first group sees the primary element of SCM in management of the flow of materials, movement and storage of materials or flow of physical goods. The second thematic category of definitions describes activities and processes of SCM in a new light of strategic and long-term orientation within supply chain relationships and partnerships. Generally one of the most distinctive features of SCM is its orientation toward the whole supply chain. SCM deals with the supply chain consisting of many independent companies as if it were a single entity or virtual organization. It then allows managing the different business processes in an efficient and effective way for the whole supply chain in order to achieve corporate performance. Therefore, SCM can be seen as a strategic tool for managing the whole supply chain.

The main two areas of interest when talking about SCM are cooperation and coordination. Even though both cooperation and coordination are equally important, most often they are researched separately. Within cooperation we differentiate among several areas: strategic transparency, strategic alignment, control of opportunism and general cooperativeness. Within coordination we also differentiate among several areas: operational transparency, synchronization of logistics processes, synchronization of decision-making processes and allocation of tasks. Whereas cooperation addresses the problem of aligning the individual interests of the network actors, coordination problems refer to problems which accrue due to problems in aligning the individual actions of the network participants. However, even after the interests and strategies of the actors have been aligned, the coordination problems may still remain.

4. Role of Influence Strategies for Supply Chain Management (Theoretical Model)

In *Chapter 4* we offer an extension of the theoretical concepts which were reviewed in *Chapters 1-3* and present our argumentation on how the research assumptions about supply chains and networks and their management, the existence and distribution of power in supply chains and networks and use and role of influence strategies for SCM were developed. Moreover, we examine the different possible effects of influence strategies and develop a theoretical model on the role of influence strategies for coordination and cooperation by formulating research hypotheses in the context of SCM with specific attention to cooperation and coordination issues.

4.1 Development of Research Assumptions

In order to proceed with the formulation of research hypotheses we would like to present you with the following scheme which reflects how power and influence strategies are related and illustrates the process of how the influence strategies work. As this scheme shows, power which is the ability to influence decisions, actions and intentions of others – in other words the ability to use influence strategies – is a latent construct which cannot be grasped or touched (Figure 9).

Figure 9. Relations between resources, power and influence strategies
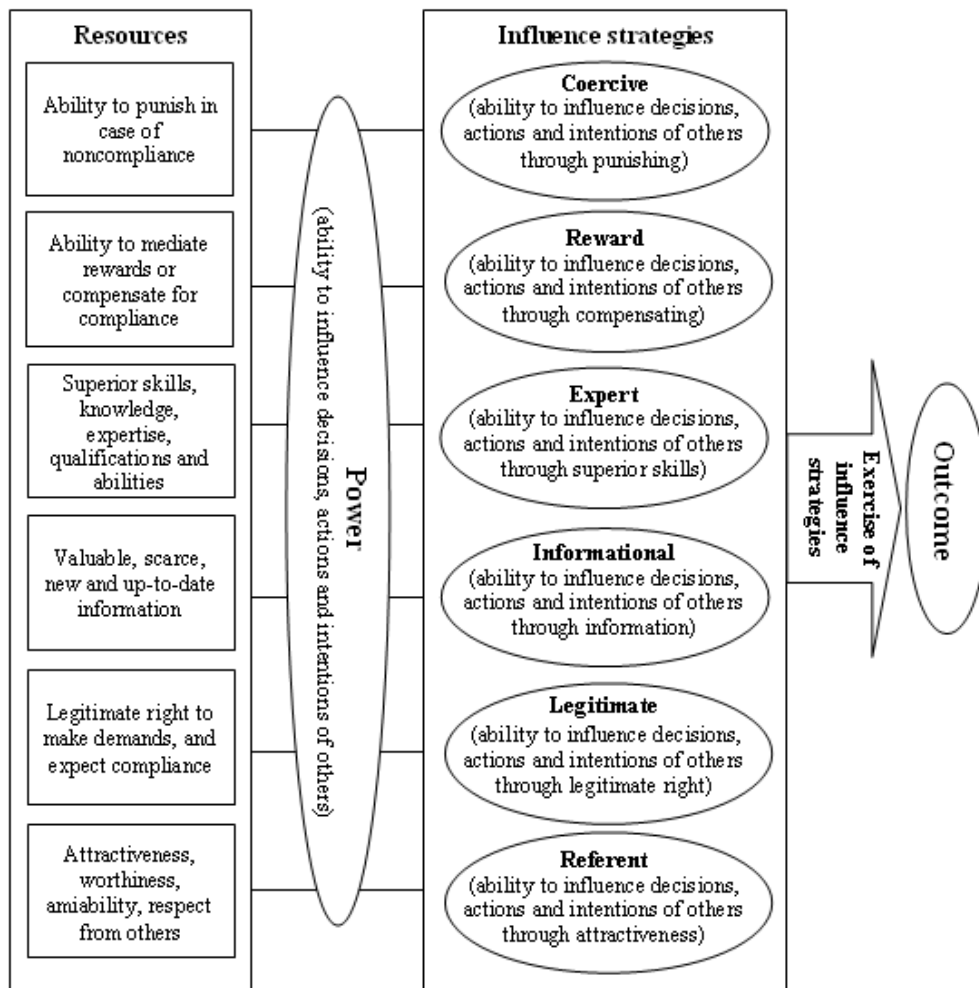
Source: own accomplishment

In order to be able to use, e.g., expert influence strategies, one should possess specific resources such as superior skills, knowledge, expertise or other extraordinary qualifications.

Before we continue to develop the theoretical model, we would like to draw your attention to several important research questions and assumptions which arise after the discussion in the previous sections (Table 2).

Table 2. Summary of research questions and assumptions

Thematical category	Research questions	Research assumptions
Supply chains and networks and their management	- Are there any problems in relationships among Western (foreign food processors, retailers) and local partners (suppliers, food processors, retailers)? - Are there any difficulties in managing supplier-buyer relationships with regard to coordination and cooperation? - Can the concept of SCM be seen through the lens of cooperation (alignment of interests) and coordination (alignment of actions)? - If yes, do the problems of cooperation (alignment of interests) differ from the problems of coordination (alignment of actions)?	*A1: Problems in relationships among Western and local partners exist.* *A2: Problems of managing supplier-buyer relationships can be grouped into problems of cooperation (alignment of interests) and coordination (alignment of actions).*
Existence and distribution of power in supply chains and networks	- Does any power exist in supplier-buyer relationships at all in Russia? - If yes, how is power distributed among supply chain actors and why? - Which supply chain actors possess more power than the others? - What are the sources of this equal/unequal power distribution? - Can power or its sources be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974)?	*A3: Power exists in supply chains and networks.* *A4: Power is asymmetrically distributed among actors in supply chains and networks.* *A5: The closer the supply chain actor is to the consumer along the supply chain, the more power he possesses (retailers are the most powerful, etc.).* *A6: Power can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974).*
Use and role of influence strategies for supply chain management	- Are influence strategies used for managing SCM? - If yes, can they be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974)? - What influence strategies are used more often and which ones are less often or not used at all and why? - What is the perceived effect of using certain influence strategies for SCM?	*A7: Influence strategies are used by focal companies for supply chain management.* *A8: Influence strategies can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) /Hunt and Nevin (1974).*

Source: own accomplishment

In the following section we would like to present our argumentation on how the research assumptions A1-A8 about supply chains and networks and their management, the existence and distribution of power in supply chains and networks and use and role of influence strategies for SCM, were developed.

Supply chains and networks and their management
When entering Russia, many foreign companies encountered problems, apart from high entry barriers, in the form of complicated title registration procedures, unreliable quality of supplied products, a lack of production know-how and financing for farmers, supply chains characterized by distrust and an absence of professionalism (Tretyak and Sheresheva, 2005) in the Russian management style, because it was so different from the Western management practices. In the Russian world and prior to the recent changes, the purpose of a company was to serve a centralized and planned economy by complying with some production standards (Yakovlev and Kokorev, 1995). Traditional Russian companies did not seem to be customer oriented. If customers experienced a problem with a product just purchased, they often had to solve the problem themselves (Fey, 1995). Therefore, since management concepts are different from those of the Western companies, one may assume that the foreign retailers and food manufacturers operating in Russia might experience problems in managing supply chain relationships with their local partners. Moreover, since chain management is not only about the alignment of actions (coordination), but also about the alignment of interests (cooperation), we present the following research assumptions about supply chains and networks and their management within the context of foreign and local companies.

A1: Problems in relationships among Western and local partners exist.
A2: Problems of managing supplier-buyer relationships can be grouped into problems of cooperation (alignment of interests) and coordination (alignment of actions).

Existence and distribution of power in supply chains and networks
On the background of evolving coordinated supply chains, the phenomenon of asymmetrical power[6] distribution seems to potentially exist. In fact, the natural state for supply chain relationships does not appear to be the one of symmetry and equilibrium (Ogbonna and Wilkinson, 1996). Hence, a number of authors (Medcof, 2001; Gulati and Sytch, 2007) address the issue of power in this context. One of the explanations is that such factors as the size differences in favor of the central buyer as well as size differences between suppliers themselves, buyer and suppliers' different areas of expertise, and different switching costs contribute to the power inequalities within a supply chain network (Helper, 1991). Thus, the asymmetrical power relationships are observable. In the majority of Western markets retailers proved to be more dominant, since they positioned themselves as brand guarantors in the supply chain and made the shift in retail strategy from being a relatively passive assortment builder to the brand developer and manager of the whole chain. As a result, there has been a shift in power within food marketing channels towards the multiple retailer (Bourlakis, 2001; Fiddis, 1997), where the retailer is seen as the main gateway to consumers, and gate-keeper between producer and consumer (Lang, 2003). Taking into account the described facts, as well as the classification topology of French

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[6] Since we use the term 'power' in formulation of our research assumptions, there appears to be a need to clarify this concept even though it is not in the focus of this thesis. According to the finding of Belaya and Hanf (2009a), 'power' generally refers to the ability, capacity or potential to get others do something, to command, to influence, to determine or to control the behaviours, intentions, decisions or actions of others in the pursuit of one's own goals or interests despite resistance, as well as to induce changes.

and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974), we present the following research assumptions.

A3: Power exists in supply chains and networks.
A4: Power is asymmetrically distributed among actors in supply chains and networks.
A5: The closer the supply chain actor is towards the consumer along the supply chain, the more power it possesses (retailers are the most powerful, etc.).
A6: Power can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974).

Use and role of influence strategies for supply chain management
One example of the use of influence strategies could be found in a relationship of Metro and its suppliers. To many suppliers, negotiating with Metro is like arm-twisting. They are pressed to reduce the prices and forced into a bonus system common in Europe: additional discounts during sales months, big sales bonuses, advertising bonuses, etc. Russian suppliers have also been observed to possess the ability to use coercive influence strategies, as in case with Auchan as they keep retailers waiting up to 72 hours for ordered goods, and dictate shelf space, control of which is crucial for a retailer (Roberts, 2005). On the other hand, retailers also have an ability to use reward influence strategies by using discounts imposed for special events such as store openings. For example, Russian retailers practice return of expired products to manufacturers. This means extra expense to suppliers. Therefore, some foreign retailers made agreements with local suppliers, stipulating no return of expired goods. The same ability to use reward influence strategies is observed in payment tenor for shipped goods (Belaya and Hanf, 2009f). Metro's payment tenor does not exceed thirty days, whereas other retail players have longer payment tenors - around 70 days. Such rewarding behaviour attracts suppliers and makes them more willing to cooperate with foreign retailers. Another example is the use of expert influence strategies. Retailers and branded food manufacturers operating in Russia use modern SCM concepts which were proven to be effective and successful and possess the knowledge and expertise in how to organize and manage the whole supply chain network. Our research assumptions about use and role of influence strategies for SCM look as follows.

A7: Influence strategies are used by focal companies for supply chain management.
A8: Influence strategies can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) /Hunt and Nevin (1974).

After discussion the relevance of influence strategies, asymmetry and distribution of power and role of influence strategies for SCM we would like to formulate some research hypotheses and develop the theoretical model.

4.2 Negative vs. Positive Effects of Influence Strategies

The opinions about the effects of influence strategies on supply chain relationships are very contradictory (Belaya and Hanf, 2009b; Belaya and Hanf, 2009e). There are those that view the concept of influence strategies as alien to the effective workings of exchange relationships and success and state that it negates cooperation (Doney and Cannon, 1997; Bretherton and Carswell, 2002). Naudé and Buttle (2000) expressed the common view of it to be a negative influence and not helpful in the building of relationship quality; where the

most important attributes of a good supply chain relationship are cited as being trust, integration, mutual understanding of needs, profit and satisfaction. Kumar et al. (1998) also viewed power imbalance as the antithesis of trust, and represents the opinion that the use of influence strategies is generally viewed in a negative sense. Besides, it has to be taken into account that power imbalance might create opportunities for to act opportunistically, which may dissolve relational elements necessary for the development of effective supply chain relationships.

Many authors put an emphasis on the necessity for symmetry and mutuality in order to foster longer-term relationships, whilst power asymmetries are associated with less stability and more conflict and are considered to be detrimental to sustaining a business relationship (Rokkan and Haugland, 2002; Ganesan, 1994; Gummesson, 1999). Moreover, Giebels et al. (1998) stated the opinion that in case of a power imbalance there appears to be difficulty in fostering the information flow which is a precondition for the successful negotiation of an exchange. Informational influence strategies, if they are used for manipulative purposes and based on deceit and opportunism, may destroy cooperation and have an overall negative effect on supply chain relationships. Other researchers have argued that a high level of power will lead its possessor to exploit the other party by frequent use of relatively coercive influence strategies (Bannister, 1969; Robicheaux and El-Ansary, 1975), for example in order to negotiate lower costs, higher quality, reasonable delivery times, and special exigencies (Maloni and Benton, 1997), which is seen as detrimental for the target of influence (Thompson, 1967; Stolte and Emerson, 1976).

Many authors stated that the firm with the power advantage consistently abuses the other firm over time (Stern and Reve, 1980) or that manufacturers exploit weaker suppliers to obtain superior economic returns (Perrow, 1970; Dore, 1983). Johnsen and Ford (2001) posit that according to the nature of supply chain relationships, retailers attempt to control the resources of their suppliers and limit their ability to take advantage of new opportunities such as the development of new international markets and customer relationships. However, in our view, before we continue to discuss the negative side of influence strategies a clear distinction should be made about their abuse and non-abuse of influence strategies. It is quite obvious that when influence strategies are misused there can be little constructive effect on any relationship especially a long-lasting one.

Baldwin (1971) stated that fear, anxiety, and resistance are typical responses to threats and that "if A uses negative sanctions today, B will tend to be less willing to cooperate with A in the future." The consequences of such situations could be inevitable. When one party is threatened, it will be more likely to seek alternative alliances (Ireland and Webb, 2007). So coercion may represent the negative side of influence strategies. The works of Hunt and Nevin (1974) indicated that coercive influence strategies (punishments) are related positively to intrachannel conflict and inversely to dealer satisfaction, whereas non-coercive influence strategies exhibit the opposite relationships. Exercising influence strategies against other members of the supply chain might have short-term benefits for the focal organisation, but reduces its success in the long-term (Cousins, 2002). According to Chatziaslan et al. (2005) the use of influence strategies by a dominant customer against a weaker supplier can drive the supplier out of business or out of the specific market, if its returns are not reasonable. So the use of coercive influence strategies may have a negative effect in the sense that the targets of influence may lose interest in the relationship and, thus, the long-term goals of the influencing party may fail to reach its long term goals.

It can also be assumed that reward influence strategies may have an element of coercion in them and can, therefore, have the same effect of relationships as coercive influence strategies. The overly frequent use of reward influence strategies is likely to damage relational norms (Boyle et al., 1992) and cooperation (Skinner et al., 1992). In our view the

exaggerated use of reward influence strategies may lead to distrust, suspicion and eventually abstance by the target of influence to entering a trustful relationship. If unrealistically high discounts or other offered rewards are unusual for the culture or mentality of the latter, they may be associated with corruption attempts or bad purposes.

As stated by Etgar (1976) expertise, referent, and legitimate influence strategies may be less effective than reward and coercive influence strategies because they are less flexible and can often be viewed as being unrelated to specific performance by channel members. Their effectiveness may decline over time. For example, expert advice, once given, may provide the channel member with the ability to operate without such assistance in the future. Also, high degrees of identification between dealers and suppliers may be associated with less channel control.

We suppose that another major disadvantage of expertise, referent, and legitimate influence strategies is that they may have a more limited scope of applicability than rewards and penalties. Supply chain members may accept the control of a leading company but only in specific, well-defined areas of operation. Thus, they might be willing to accept decisions about the introduction of new products if the leader is perceived to be expert in this field. Yet they may resist his attempts to impose controls over such decision areas as pricing or promotion. They may also develop envy in cases with expert influence strategies and abstain from entering a cooperative relationship. Besides, it is difficult to predict the reaction of a target of influence in a case with legitimate influence strategies, because the latter may choose not to enter the relationship if it feels intimidated.

Having examined the negative sides of influence strategies, now let us take a look at their positive sides. To many authors the use of influence strategies appears to be synonymous with oppression, coercion and force, despite the fact that such negative approaches are just one aspect of influence strategies (Duke, 1998). There is a body of literature stating that influence strategies can be used by the focal actor as an effective tool in coordinating and promoting harmonious relationships, solving conflicts, and, therefore, enhancing higher performance of the whole network and its individual members.

There are a number of others who argued that power is vital, because it can take the relationship out of the realm of chance and give it purpose, order, and direction (Dwyer et al., 1987; Kumar, 2005). Condliffe (1944) said that power, involving the possible use of force, is not necessarily evil but may be used to achieve moral purposes. Other researchers have emphasized the role of influence strategies in providing for effective coordination of the exchange relationship, rather than its potential for exploitation. Blau (1964) provided the underlying foundation for this viewpoint. In a marketing channels context, Stern and Heskett (1969) theorized that the exercise of power can have a positive role in the achievement of integration, adaptation, and goal attainment within the channel system. Bierstedt (1950) suggested that power stands behind every association and sustains its structure, without power there is no organization, no order.

Some authors see the positive side of influence strategies in promoting coordination in supply chain relationships. Bachmann (2001) stated that power can be seen as a mechanism for coordinating social interactions efficiently and for allowing relatively stable relationships to develop between cooperating social actors. Besides, Stern and E1-Ansary (1992) asserted that channel members may use influence strategies to determine who will undertake which marketing activities, coordinate the performance of these tasks, and manage conflict among themselves. For example, when incomplete contracts fail, the use of influence strategies can intervene and let the transaction work out. As for the imbalance of power, relationships based on a perfectly stable balance may not always be possible, and targets of influence, for example, may tolerate the imbalance in order to gain and perhaps maintain a lucrative business (Gummesson, 1996).

We have discussed the views on the damaging nature of coercive influence strategies. However, some authors who have emphasized the positive aspects of influence strategies argue that possession of power need not suggest exploitation or frequent use of coercion (Blau, 1964; Stern and Heskett, 1969). Furthermore, the use of coercive influence strategies has been hypothesized to weaken exchange relationships, reduce trust, and invite retaliation (Bucklin, 1973; Raven and Kruglanski, 1970), but empirical evidence on these issues is limited. In contrast, other researchers have emphasized the role of influence strategies in providing effective coordination of the exchange relationship, rather than its potential for exploitation.

Obviously, the exercise of non-coercive influence strategies does not include any aggressive elements which may produce friction in the relationship. On the contrary, it fosters a relatively high level of agreement between the interacting parties, since to a large extent it contains the 'inherent desirability' of performing certain actions (Frazier and Summers, 1984). Moreover, the use of non-coercive influence strategies helps to increase financial and social benefits, through, for example, the offering of financial rewards, provision of assistance, and access to specialized information (Wilkinson, 1979). Therefore, this kind of influence strategy can help to promote common interests and collective goals within the relationship, as well as enhance a friendly and constructive atmosphere.

A number of scientists found that the use of non-coercive influence strategies results in a greater level of satisfaction with the exchange relationship on the part of the firm receiving the influence attempt than does the use of coercive influence strategies (Hunt and Nevin, 1974; Lusch, 1977); that non-coercive influence strategies are inversely, and coercive sources directly, related to the existence of interfirm conflict (Lusch, 1976; Wilkinson, 1981); and that the use of non-coercive influence strategies is positively related to the performance of the firm which is subjected to the influence attempt (Sibley and Michie, 1981). Furthermore, scholars who have studied influence strategies suggested that non-coercive influence strategies provide better alternatives for enhancing the satisfaction of less powerful trading partners (Hunt and Nevin, 1974; Lusch, 1976). Gaski (1986) stated that it is through reward and coercive influence strategies that partner perceptions (such as expert, referent, and legitimate influence strategies) are managed to create harmonious and enduring interorganizational exchange relationships. If the use of influence strategies is based on genuine rewards, the supplier will be willing to accept them and enter into a trustful relationship.

As for referent influence strategies, the use of a positive image and good reputation by a chain leader may positively impress the supplier and will foster the development of trust. The positive effect of legitimate, expert and informational influence strategies can also be observed in providing an effective coordination of exchange relationships, as the distribution of power has become legitimate over time (Frazier and Antia, 1995; Kalafatis, 2000). The acquisition of special knowledge or technology in order to achieve a powerful position and the use of expert influence strategies formed this way will contribute to the positive development of a trustful relationship. Since the legitimate influence strategies originate from a given position or existing norms or laws, the target of influence may take the protection offered by the legitimized powerful position of the stronger party for an additional advantage. Informational influence strategies are also claimed to have a positive effect on channel and network relationships, as they help to build trust and cooperation, and enhance positive attitudes toward the long-term channel relationships.

Therefore, influence strategies can also have a positive effect on supply chain relationships as they are an effective tool in correcting organizational problems, solving conflicts and promoting harmonious interorganizational relationships, which ultimately results in

enhanced performance for the supply chain network as a whole as well as for its individual members.

4.3 Development of Research Hypotheses

Proceeding further we develop the theoretical model on the role of influence strategies for coordination and cooperation and formulate research hypotheses H1a-H6b in the context of SCM with specific attention to cooperation and coordination issues (Figure 10).

Figure 10. Theoretical model on the role of influence strategies for coordination and cooperation
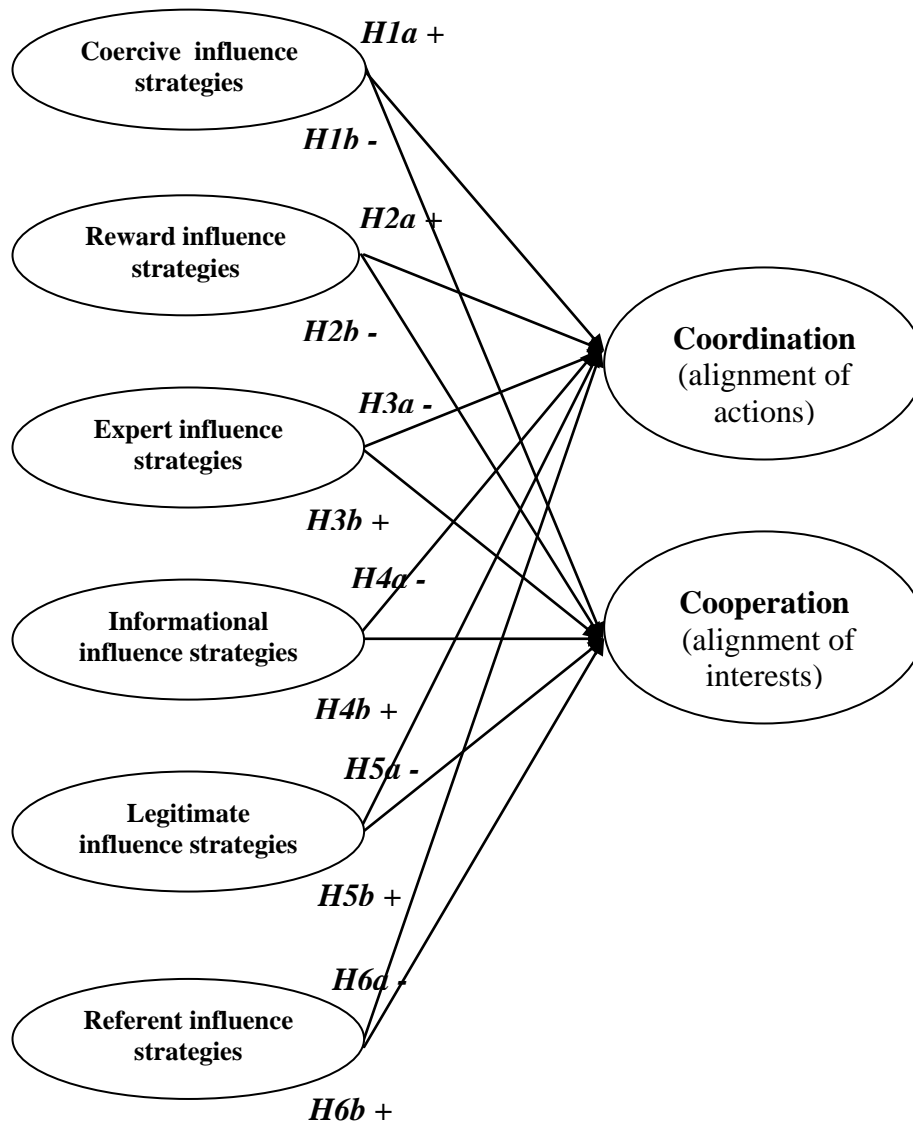
Source: own accomplishment

The formulated research hypotheses H1a-H6b are presented in Table 3 and explained in the following section.

Table 3. Summary of research hypotheses

Influence strategies	Effect on coordination	Effect on cooperation
Coercive influence strategies	**H1a:** Within a supply chain network, the perceived use of coercive influence strategies will have a *positive (+)* effect on coordination.	**H1b:** Within a supply chain network, the perceived use of coercive influence strategies will have a *negative (-)* effect on cooperation.
Reward influence strategies	**H2a:** Within a supply chain network, the perceived use of reward influence strategies will have a *positive (+)* effect on coordination.	**H2b:** Within a supply chain network, the perceived use of reward influence strategies will have a *negative (-)* effect on cooperation.
Expert influence strategies	**H3a:** Within a supply chain network, the perceived use of expert influence strategies will have a *negative (-)* effect on coordination.	**H3b:** Within a supply chain network, the perceived use of expert influence strategies will have a *positive (+)* effect on cooperation.
Informational influence strategies	**H4a:** Within a supply chain network, the perceived use of informational influence strategies will have a *negative (-)* effect on coordination.	**H4b:** Within a supply chain network, the perceived use of informational influence strategies will have a *positive (+)* effect on cooperation.
Legitimate influence strategies	**H5a:** Within a supply chain network, the perceived use of legitimate influence strategies will have a *positive (+)* effect on coordination.	**H5b:** Within a supply chain network, the perceived use of legitimate influence strategies will have a *negative (-)* effect on cooperation.
Referent influence strategies	**H6a:** Within a supply chain network, the perceived use of referent influence strategies will have a *negative (-)* effect on coordination.	**H6b:** Within a supply chain network, the perceived use of referent influence strategies will have a *positive (+)* effect on cooperation.

Source: own accomplishment

Coercive influence strategies

Researchers have argued that frequent use of coercive influence strategies will lead the influencing party to exploit the target (Bannister, 1969; Robicheaux and El-Ansary, 1975), e.g. in order to negotiate lower costs, higher quality, reasonable delivery times, and special exigencies (Maloni and Benton, 1997), which is seen as detrimental for the target of influence (Thompson, 1967; Stolte and Emerson, 1976). So coercion is the classical case of the negative side of influence strategies. Hunt and Nevin (1974) indicated that coercive influence strategies are related positively to intrachannel conflict and inversely to dealer satisfaction, whereas non-coercive influence strategies exhibit the opposite relationships. Exercising coercive influence strategies against other members of the supply chain might have short-term benefits for the focal organisation, but reduces its success in the long-term (Cousins, 2002). Therefore, since coercive influence strategies in general are considered to be negatively related to cooperation (Brown et al., 1995; Maloni and Benton, 2000; Benton and Maloni, 2005), and since it has been demonstrated in the experimental psychology literature that the more intense the punishment, the stronger the effects on behaviour (Zwick and Chen, 1999), we assume that coercive influence strategies will negatively affect cooperation.

However, Stern and E1-Ansary (1992) asserted that channel members may use influence strategies to determine who will undertake which marketing activities, coordinate the performance of these tasks, and manage conflict among themselves. Hamner and Organ (1978) suggested that in such a circumstance punishment (whether intentional or unintentional) is one of the most readily available means for shaping (and maintaining) the

behaviour of subordinates. Although punishment does not by itself change motives, it is believed to be effective in changing behaviour when used in combination with reward (Ruch, 1963). Other authors point out the positive effect of coercive influence strategies in promoting coordination and viewed coercive influence strategies as a mechanism for allowing relatively stable relationships to develop between cooperating social actors (Stern and E1-Ansary, 1992; Bachmann, 2001)

Within a supply chain network, the perceived use of coercive influence strategies will positively affect coordination (H1a) and negatively affect cooperation (H1b).

Reward influence strategies

In the literature, the described effects of reward influence strategies on buyer-supplier relationships are mixed (Maloni and Benton, 2000; Zhao et al., 2008). Moreover, it is suggested that reward influence strategies have a positive effect when the culture supports cooperative and supportive relationships. Gaski (1986) stated that it is through reward and coercive influence strategies that partner perceptions create harmonious and enduring interorganizational exchange relationships. If the use of influence strategies is based on genuine rewards, the supplier will be willing to accept them and enter a trustful relationship. If a retailer continuously uses reward influence strategies to give rewards to its suppliers who comply with its quality standards and deliver on time, it can promote cooperation and generate trust in this relationship. Assuming that reward influence strategies are perceived as having an element of coercion, and provide extrinsic motivation to comply with the requirements in order to achieve favourable outcomes (Zhao et al., 2008) and since both reward and punishment provoke rapid changes in behaviour (Dickinson, 2001), they will have a positive effect on coordination.

The overly frequent use of reward influence strategies is likely to damage relational norms (Boyle et al., 1992) and cooperation (Skinner et al., 1992). Therefore, the exaggerated use of reward influence strategies may lead to distrust, suspicion and eventually abstenance from entering a trustful relationship by a target of influence, particularly if unrealistically high discounts or other offered rewards are unusual for the culture or mentality of the latter, because they may be associated with corruption or bad purposes. The target of influence may suspect deceit and abstain from entering a relationship, if rewards are exaggerated or unusual for its culture or mentality. In this case, reward influence strategies will have a negative effect on cooperation.

Within a supply chain network, the perceived use of reward influence strategies will positively affect coordination (H2a) and negatively affect cooperation (H2b).

Expert influence strategies

Expert influence strategies are considered to be less effective than coercive and reward influence strategies because they are less flexible and unrelated to specific performance of supply chain members (Etgar, 1976). Besides, their effectiveness may decline over time. For example, expert advice, once given, may provide the channel member with the ability to operate without such assistance in the future. Another major disadvantage is that it may have a more limited scope of applicability than rewards and penalties. Supply chain members may accept the control of a focal actor but only in specific, well-defined areas of operation. Thus, they might be willing to accept decisions about the introduction of new products if the focal actor is perceived to be expert in this field. Yet they may resist the attempts to impose controls over such decision areas as pricing or promotion. We assume that depending on characteristics and goals of the participating parties as well as the environment (e.g., a highly competitive environment), the target of influence may envy the

influencing party which is considered an expert in a given area, and abstain from entering a cooperative relationship, or it may become more attracted to the influencing party, which is an expert in a given area and be more motivated to enter a cooperative relationship.

In general, the acquisition of special knowledge or technology in order to achieve a powerful position and the use of expert influence strategies formed this way will contribute to the positive development of cooperation within a supply chain relationship. However, expert influence strategies are perceived as positive when solicited and given. Offering free advice through an agency and advisory staff as part of project implementation is seen to be a valuable incentive for the target of influence to get involved in the project (Davies et al., 2004). Besides, some authors emphasized that consultation and swapping of information might produce expectations of reciprocity and trust (Blau, 1964; Coleman, 1990). Expert influence strategies could be most effective as an influence tactic when the objectives of the person being influenced match those of the leader (DuBrin, 2000).

*Within a supply chain network, the perceived use of expert influence strategies will negatively affect coordination (**H3a**) and positively affect cooperation (**H3b**).*

Informational influence strategies

Giebels et al. (1998) voiced the opinion that in the case of a power imbalance, there appears to be difficulty in fostering the information flow, which is a precondition for the successful negotiation of an exchange. Gaski (1986) argued that the use of informational influence strategies involve manipulative aspects. Its use has been defined as seeking 'self-interest with guile' (Williamson, 1975) and concerns possession and dissemination of valuable information and is based on deceit and opportunism of the influencing party. Stern and El-Ansary (1988) also supported the statement that informational influence strategies are likely to have a negative effect on coordination in channels of distribution. They argued that channel participants do not necessarily view each other as partners, but rather as rivals. Therefore, the use of informational influence strategies in this case is not well-received. If informational influence strategies are used for manipulative purposes, based on deceit and opportunism, they may destroy or have an overall negative effect on coordination. The fact that information is shared and exchanged may be convincing for the target of influence, since the influencing party does it voluntarily. However, Payan and McFarland (2005) found that information exchange has a lower likelihood of compliance with the requirements of the influencing party because it is the most unfocused of the influence strategies. Therefore, information exchange lacks specificity as to what needs to be done. The specific reaction that the influencing party wants from the target of influence remains clouded.

As noted by Eyuboglu and Atac (1991), depending on the channel environment, informational influence strategies will have different effects on cooperation. Information exchange could have positive effect on cooperation, since it not only conforms to, but also elevates the level of relationalism between parties (Boyle et al., 1992) and is based on mutual trust (Baldwin 1971, Raven and Kruglanski 1970). We assume that in an environment in which participating parties view each other as partners and not as rivals, but rather as allies, informational influence strategies will have a positive effect on cooperation, as they help to build trust, and enhance positive attitudes toward the long-term channel relationships relationship.

*Within a supply chain network, the perceived use of informational influence strategies will negatively affect coordination (**H4a**) and positively affect cooperation (**H4b**).*

Legitimate influence strategies

French and Raven (1959) stated that legitimate influence strategies stem from internalized values which dictate that there is a legitimate right to influence and an obligation to accept this influence. Therefore, in case legitimate influence strategies are perceived by the target of influence as a form of a dictatorship, it may have a negative effect on cooperation. The study conducted by Lee and Low (2008) indicated that legitimate influence strategies showed positive relationships with satisfaction. Effective coordination of exchange relationships has been observed as a positive effect of legitimate influence strategies, as the distribution of power becomes legitimate over time (Frazier and Antia, 1995; Kalafatis, 2000), and a more standardized business format is applied, such as contracts (Mohr et al., 1996; Lusch and Brown, 1996; Jap and Ganesan, 2000).

However, intrinsic factors provided by non-mediated (legitimate, referent, expert, informational) influence strategies tend to overweigh extrinsic factors such as rewards and punishments (Brown, et al., 1995). As for legitimate influence strategies, it is difficult to predict the reaction of a target of influence, because the latter may choose not to enter the relationship, if it feels intimidated. Legal sanction based on legal contractual agreement would be perceived as a punishment (Gaski, 1986). Boyce et al. (1992) suggested that in the effective operation of an agreement, it is the spirit rather than the written word that is important. The written word becomes significant when things are going very wrong. According to this statement, legal contracts specifying formal written rules and obligations could be a harder form of legitimate influence strategies than cooperative norm, which only refers to 'unwritten' unofficial norms, unofficial values, norms, shared values, rules of conduct, and beliefs that guide actions and behaviours. Regulations and economic incentives play an important role in encouraging changes in behaviour, but although these may change practices, there is no guaranteed positive effect on personal attitudes (Gardner and Stern, 1996).

*Within a supply chain network, the perceived use of legitimate influence strategies will positively affect coordination (**H5a**) and negatively affect cooperation (**H5b**).*

Referent influence strategies

As for referent influence strategies, since they were ranked highest among other influence strategies in connection to satisfaction (Lee and Low, 2008), and since cooperation has been found to go hand in hand with satisfaction (Gaski, 1984), we suppose that the use of a positive image and good reputation by a retailer company will positively impress the supplier and will foster the development of cooperation. Dapiran and Hogarth-Scott (2003) emphasized that cooperation comes about through the use of expert and referent influence strategies. Suppliers would also be more willing to comply with the requirements of internationally recognized retailers and fulfill their commands. For example, big multinational retailers usually have an international recognition and a certain level of image when entering foreign countries and suppliers would be more willing to cooperate with partners who have a good and proven reputation. Venkatesh et al. (1995) found recommendations to be more effective than other influence strategies, explaining that strategies based on intimidation usually encounter resistance and thus tend to be less effective. Besides, Payan and McFarland (2005) found that recommendations have a significant, positive impact on trust, therefore, we hypothesize that recommendation will have a positive effect on cooperation.

However, high degrees of identification between dealers and suppliers may be associated with less channel control. Referent influence strategies might not be sufficient to motivate the target to the implementation of certain tasks, since they do not represent an explicit

statement of the desired behaviour. Referent influence strategies are seen to infuse targets with moral purpose and commitment rather than as affecting the task environment, or by offering material incentives and the threat of punishment. Therefore, using them might not be sufficient to animate the target to the implementation of certain tasks.

*Within a supply chain network, the perceived use of referent influence strategies will negatively affect coordination (**H6a**) and positively affect cooperation (**H6b**).*

4.4 Summary of Chapter 4

In *Chapter 4* we present our argumentation on how the research assumptions about supply chains and networks and their management, the existence and distribution of power in supply chains and networks and use and role of influence strategies for supply chain management were developed. Proceeding further we critically examine different views on the effects of influence strategies on supply chain relationships and develop the theoretical model on the role of influence strategies for coordination and cooperation by formulating research hypotheses in the context of supply chain management with specific attention to cooperation and coordination issues.

Since coercive influence strategies are seen as a mechanism for coordinating social interactions efficiently and since it has been demonstrated that the more intense the punishment, the stronger are the effects on behaviour, we assume that coercive influence strategies positively affect coordination and negatively affect cooperation. Due to the fact that reward influence strategies are perceived as having an element of coercion and providing extrinsic motivation, we assume that they will positively affect coordination and negatively affect cooperation. Since expert influence strategies may be less effective than coercive and reward influence strategies because they are less flexible and are often viewed as being unrelated to specific performance by channel members we expect them to negatively affect coordination and positively affect cooperation. We also hypothesize identical effects for expert influence strategies as for informational influence strategies since they are the most unfocused of the influence strategies. Since regulations and legal contractual agreements play an important role in encouraging changes in behaviour we assume that legitimate influence strategies positively affect coordination and negatively affect cooperation. As for referent influence strategies, we suppose that the use of a positive image and good reputation will foster the development of cooperation, but negatively affect coordination, since they do not represent an explicit statement of the desired behaviour.

5. Russian Agri-food Business (Study Domain)

In *Chapter 5* we describe the recent trends in the Russian agri-food business, which we have chosen to be the study domain of the thesis. We begin by studying the process of vertical coordination in the agri-food business and the resulting managerial challenges for enterprises which operate in Central and Eastern European (CEE) countries. We proceed by examining the literature on the influence of Foreign Direct Investments (FDI) on transition economies by taking the example of Russia. Finally, we elaborate on the retail food sector as one of the examples of the Russian agri-food business. We deliberately chose only one example and avoided the description of the agricultural producers and the processing industry in order to keep the chapter concise. However, we indicate the references to further recommended readings about this subject published by the author earlier.

5.1 Vertical Coordination

Food production, processing, distribution, and retailing have never been under greater scrutiny by stakeholders than they are today. The necessity to increase food safety and quality, reduce costs and waste, build customer and stakeholder value, and achieve social and environmental stewardship requires the whole food chain to act jointly. Many authors underline the increasing requirements of consumers, large retailers and branded food manufacturers with respect to product quality and traceability as important drivers of more integrated food supply chains at the national, regional and global levels (Schulze et al., 2007; Götz et al., 2009). This enhances the process of vertical coordination in the agri-food business, i.e., the tightening of the procurement relationships. Depending on relative transaction costs and costs of physical product flows, vertical coordination becomes apparent in the form of vertically integrated firms or vertically cooperating hybrids. Such hybrids consist of many organizations acting together, with each organization dependent on the performance and actions of the others (Brito and Roseira 2005). Because such collaborations are most often induced by a focal company, i.e., branded processors or retailers, they dispose over a pyramidal-hierarchical structure (Hanf and Pieniadz, 2007; Hanf and Pall, 2011). Therefore, vertical coordination represents the highest degree of coordination that can be achieved through vertical integration and implies that spot markets transactions are replaced by intra-firm transactions (Götz et al., 2009).

Central and Eastern European (CEE) countries make no exception in this regard and – even more – demonstrate a significantly wider scope and higher complexity of vertical coordination than Western economies. But, paradoxically, this development is to a large extent induced by the Western investors' who strive to establish well-functioning supply chains. Imported chain-wide business models usually serve as a means of competitive advantage for them. In order to successfully compete with the foreign capital, local companies mainly recourse to imitating these chain-wide strategies. The starting point for a tighter vertical coordination in Central and Eastern Europe stems from the fact that during the transition process, relationships along the whole food chain – from farm suppliers to retailers – have broken down. The result has been disruptions of supply and inferior-quality food products, i.e., vertical coordination can be described as the coordination of each link in the food chain to overcome problems of supply and quality. Thus, traders, agribusinesses, and food companies contract with farms and provide inputs and assistance in return for guaranteed supplies of a certain quality (Dries and Swinnen, 2004; Gorton et al. 2006; Swinnen, 2005). Thus, food quality can only be achieved if all participants of the

food chain work together. Therefore, the managerial approach has to be a chain-wide concept, i.e., chain quality management.

Vertical coordination and the resulting managerial challenges can be viewed as one of the most relevant challenges for enterprises which are or want to be active in CEE countries. Swinnen (2005) shows that vertical coordination is an important and growing phenomenon in the agri-food chains of CEE countries. A major reason for verticalisation is that private contractual initiatives were formed to overcome supply disruptions (Valentinov, 2003). Quality can be regarded as the main source to catalyse the development (Gorton et al. 2006). Because foreign direct investments (FDI) most often demand higher quality and have a significant influence in the food sector, these companies can be regarded as a more powerful source of structural changes in transition countries than the WTO and trade policy (Swinnen, 2005).

Today the Russian food supply chain is undergoing structural changes with a growing orientation towards end consumers. Recently, the requirements of end consumers have improved with regard to quality characteristics of food products, their assortment, package features, and the way they are offered at a store. To a great extent, the improvement of consumers' requirements can be explained by the increase in incomes and the development of the retail sector. Motivated by growing competition in the sector, retail companies provide their customers with a range of offers in the style of items, store location, and quality-related offers. Moreover, the importance of brand management has substantially increased.

For retailers, it is obviously more beneficial to work with large-scale suppliers (Swinnen, 2005). A specific feature of agriculture in some CEE countries including Russia is that most of the gross agricultural output is produced by households. The processing industry is currently represented by several distinguished actors. There is some evidence of consolidation at some stages of the supply chain, which is also to some extent due to the fact that large-scale structures are traditionally preferred in Russia (Pieniadz et al., 2010). Although planned vertical coordination was exercised before 1990 in CEE countries, today the majority of transactions in the agri-food chain are coordinated via the price mechanism as arm-length transactions (Gagalyuk and Valentinov, 2009). Existing contracts are broken quite often to gain a short-term advantage. One reason for this is that contracts cannot be realized due to poor contract enforcement mechanisms. Gorton et al. (2003) report that medium-sized processing enterprises suffered most of all, where about 12 % of existing contracts were not realized by suppliers in 2001. At the same time, small enterprises do not use any contracts at all.

There are two reasons for contract breaching in transition countries (Swinnen, 2005). First, producers mistrust their buyers and are afraid of not being paid for production. Second, they may not be able to fulfil a contract because they cannot access basic production factors. Again, as a result of the lack of necessary inputs, expertise, and know-how, a shortage of quality supplies has occurred in the Russian agribusiness. Initial vertical ties did not aim to resolve this issue because most contracts between vertical partners omitted the issue of food quality. After all, processors usually offered commodity credits to their suppliers (agricultural enterprises) just to use their production capacities.

Nonetheless, foreign direct investments into the Russian agribusiness are increasing. FDI can be found at the farm and processing levels as well as in the retail sector. An essential part of global retailers' and manufacturers' businesses is connected with producing or selling high-quality products. Several studies on the effects of FDI in CEE countries show that foreign investors work hard to raise the level of quality of their suppliers in order to meet their own global quality requirements. Further on, international retailers impose high

(global) private standards to differentiate their products from those of the competitors, i.e., these standards work as strategic tools (Swinnen, 2005).

Because the commodities are often produced by households, processors and retailers face problems determining the supply quality. An example of finding a solution to this problem can be found in the dairy sector. The processors deal with this situation organizing their own collecting stations in order to coordinate their suppliers and conduct random quality tests. Furthermore, milk processors assure quality supplies from agricultural enterprises by leasing cooling tanks to them as part of their contracts. These findings correspond to those of the other authors on processors' farm assistance in other transition countries and sectors, e.g., Gorton et al. (2006) in Moldavia, and Swinnen (2005) in Bulgaria and Romania. The following example of Russia illustrates how foreign investors can deal with the transition challenges in CEE countries.

5.2 Foreign Direct Investment

Foreign Direct Investment (FDI) became an increasingly important element in global economic development and integration during the 1990s (UNCTAD, 2003). This development occurred during the process of transition from socialism to capitalism and the integration of the CEE countries into the world economy through trade and capital flows. These developments led to a large inflow of FDI in the region since the mid 90s (Konings, 2000). At that time the first wave of FDI[7] started in Russia, accompanied by the passage of the law on joint ventures with firms from capitalist countries. Initially, there was not much foreign investment. Later, in the year 2003, Russia attracted huge FDI and was placed third in FDI projects in the world, beating both China and the U.S. Moscow City and Moscow Oblast in particular are the major recipients for FDI in Russia (Broadman and Recanatini, 2001). Ahrend (2000) states that there are obviously a number of reasons why companies establish a presence in a foreign country. He divides them into those that are mainly interested in selling goods and services that they produce elsewhere, and those companies that invest into production facilities in a country, either to serve the local market or for export. This second group of FDIs seems to be observed in the food retail sector in Russia. Among the motives for internationalization of enterprises in the agri-food sector the limited possibility to grow in the home country as well as attractive location factors in the host country were also named (Stange, 2010).

Literature on the influence of FDI on transition economies mentions several positive effects of FDI. A number of authors agree that FDI facilitate economic growth and reduce poverty (Barrell and Holland, 2000; Broadman and Recanatini, 2001; Bevan and Estrin, 2004). Several studies offer empirical evidence on the importance of FDI flows for economic growth in developing countries (Borensztein et al., 1998; Blomström and Sjöholm, 1999). Other advantages of FDI generally mentioned in the literature include technology transfer and technical innovation (Hockmann, 2002) as well as enterprise restructuring (Hooley, 1998; Barrell and Holland, 2000).

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[7] In defining foreign direct investments (FDI) Russian Statistical Office follows the guidelines of the International Monetary Fund (IMF) and the Organization for Economic Co-operation and Development (OECD). Accordingly, FDI is defined as capital expenditure by an entity resident in one country (direct investor) for an enterprise resident in another country (foreign direct investment enterprise) with the objective of establishing a lasting interest, usually of at least 10 percent. FDI include: investments in the equity or authorized capital of the enterprise (these can be made either in money or in machinery, real estate or goods); credits received from the foreign mother company; other investments, such as additional shares acquired by the investor, reinvested earnings or in kind investments not included in the authorized capital.

There seems to be considerable evidence about the positive impact of FDI on managerial techniques in the host country. According to Bergsman et al. (2000) FDI brings not only capital, productive facilities, and technology transfers, but also employment, new job skills and management expertise. Dyker (2001) points out that investing companies have to impose their own corporate organisational structures on subsidiaries or partners. Those organisational structures are based on the disposition of hierarchies, lines of responsibility, the use of intra-firm e-mail systems, etc. Even if an investing company did not want its management technology to be transferred, it would not be able to stop it. The implication is that, even where there is no soft technology gap as such, soft technology will be transferred in the course of FDI. Yudaeva et al. (2000) asserts that it is supposed to be easier for domestic firms to copy technologies of foreign-owned firms located nearby than trying to reproduce a technology used in manufacturing imported goods. She calls this phenomenon "a potential spin-off" of Western managerial techniques. According to her there was no business culture in the Western sense of the word, therefore, foreign-owned firms serve as an example for domestic firms of how managers should behave.

Some authors characterize the inflow of FDI in Russia by several stages. Kadochnikov (2004) singles out three stages of FDI dynamics in Russia: 1987-1997, 1998-2002, 2003 until present time. These stages are explained by different levels of foreign investment and by different structural characteristics of investment flow during different periods. Dries and Kojakovic (2004) also propose three phases, which they call the communist period (state owned retail and procurement system); the transition period (initial privatization and breakdown of highly concentrated system into separate units that soon start to merge and form small private chains) and the globalization period (extensive investments of foreign retail chains and rapid rise of modern retail sector). All of them agree that the recent period is characterized by increasing FDI flows and governmental measures to lower foreign investment risk.

FDI in Russia started in 1987 (Kadochnikov, 2004). The economic reforms of the late 1980s permitted limited foreign investment in the Soviet Union. The first joint-venture law from June 1987 restricted foreign ownership to 49% of the venture and required that Soviet administrators fill the positions of chairman and general manager. By 1991, however, the Soviet government allowed foreign entities 100% ownership of subsidiaries in Russia.

Though FDI could be found at all stages of the chain, the processing industry, including the agri-food sector, had in general attracted the major part of foreign direct capital (Stange, 2010). In 1995, there were two big investments in food processing industry - the Mars factory at Stupino (Moscow region) and the Coca-Cola plant in Stavropol (Krasnodar region) with a total value of 150 million USD (Dyker, 1999). In 1995 the total FDI flow in food processing was 250 million USD. This figure more than doubled in 1996, but experienced a decline in 1997. In 1998 the equivalent figure was more than doubled from 506 million USD to no less than 1192 million USD.

In 1998, the food industry had a predominant position in the Russian FDI inflow: more than one third of the overall foreign direct investment took place in that branch. In 1999-2003 there was a decline in investment flows - in 2003 this figure accounted only for 345 million USD (FSSS, 2010). In 2000, the food industry received about 18.5% of all FDI, but in 2003 the equivalent figure was only just over 5%.

The first FDI in the retail sector in Russia were made by Migros Turk (Turkey) in 1997. Other major foreign retailers such as SPAR, Metro and Auchan started their investments after 1998. Edeka made its first investment in 2003. Most FDI has flown into the retail sector of the capital but Metro is also a major player on the Saint-Petersburg retail market. In 2003, sales of these foreign owned retail chains accounted for 36% of the supermarket sector in Moscow; and for 19% of the supermarket sector in Saint-Petersburg

(FAO/EBRD, 2005). Foreign investment for the first half of 2007 totaled $67 billion, compared, for instance, to $14 billion in Poland in all of 2006 (Kommersant, 2007). Due to the favorable conditions offered by the Russian market, the size of domestic investment is also soaring, with local entrepreneurs reinvesting in the country's economy.

According to Dries and Swinnen (2004) the spread of foreign retailers takes place in three waves of and Russia belongs to "third wave" countries, where it really started in 2002, and is growing very rapidly now (Reardon and Swinnen, 2004). The reasons for such waves were related to the state of economic development and the saturation degree of the markets, into which the retailers expanded. There are also waves observed within the country. This phenomenon called "diffusion over space within a country" by Reardon et al. (2005). The first wave was directed toward Moscow and St. Petersburg – the two biggest cities in Russia. During the second wave retailers occupied the other 12 cities of Russia with the population of about a million such as Novosibirsk, Nizhniy Novgorod, etc. The third wave covers smaller cities, where the saturation of the second wave cities makes the retailers search for other places where they can situate their outlets (Dries et al., 2004).

According to Swinnen et al. (2006) FDI has resulted from several company strategies: to serve the local market when trade constraints limit imports, to use the domestic economy advantages for exporting to the home market of the foreign company or to third markets, etc. Nowadays there is a strong competition observed in the Russian food sector among the foreign-owned food processors operating there and the large domestic processors like Wimm Bill Dann. This is especially true for the regions of Moscow and St-Petersburg.

5.3 Retail Business[8]

Russia represents the largest and fastest growing retail market opportunity among the CEE economies. It remains strong and retains the leading position among the top 30 emerging markets worldwide (A.T. Kearney 2011). The internationalization of food retailing and manufacturing that has swept through the agri-food system in industrialised countries is now moving into Russia. Farmers and policy-makers are struggling to keep up with the new demands on the local supply chains created by modern food manufacturers and retailers. The government has relatively fewer regulations for a consumer-based economy, and low maturity and saturation of the Russian market makes it attractive for global players. Limited and saturated markets in home countries combined with favourable conditions for retail trade in Russia cause foreign retailers to expand internationally and explore the new market opportunities abroad, including the Russian market. Besides, the collapse of the socialistic central planning system in Soviet Union created an additional economic vacuum, which could be filled with new Western ideas about new retail systems followed by first attempts to establish them. Today such foreign retailers as Metro, Auchan, and Rewe operate in Russia (Deloitte, 2011).

The Russian retail market is growing rapidly and attracts foreign retailers, which try to enter the market and export their SCM concepts with them. The example of Metro Group Russia underlines this point. Since entering Russia five years ago, Metro Group Russia has already installed the Metro Asset Management, Metro Buying Group, Metro Advertising, Metro Group Logistics, and Metro Group IT. The Metro Group exerts a strong influence on the Russian agribusiness in general, and on the local agri-food sector in particular,

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[8] As mentioned at the beginning of the chapter, we deliberately chose retail business as an example for describing Russian agri-food business. A detailed description of different sectors of the Russian agri-food business could be found in Belaya and Hanf (2010) and Belaya and Hanf (2009f).

because the markets are mostly located in the Moscow region. This example supports the idea that when Western enterprises are in the fledgling stages they try to impose their procurement and logistic business concepts on the local suppliers.

Russia witnessed increased consumer spending and a demand for consumer products that ultimately led to considerably increased retail sales, which is a good sign for the retail companies. In 2006, retail food sales accounted for more than 46% of Russian retail sales. The most visible sign of growth in the retail food sector has been the rapid introduction and expansion of supermarket chains. Household spending habits for Russia's urban population, particularly for food, illustrate the role of the primary retail channels in Russia's grocery stores, produce markets, and supermarkets. The central region that includes Moscow and St Petersburg has the dominant share (38%) of the retail market. In Moscow, retail chains hold 16 - 17 % and in St. Petersburg 18 - 20 % (BBE, 2006).

The Russian retail market is dominated by small and medium-sized traditional stores, open markets, kiosks or other specialized stores with convenient locations, and consumer goods markets that offer low prices. A large portion of the population still continues to shop in open markets. Leading shopping formats in Russia are still street shops and open markets, small shops, other shops and kiosks. Only about 14% of sales take place in 'modern, Western style' retail outlets such as hypermarkets, supermarkets, discount stores, or cash &carry outlets. The majority of purchases, 32%, are still conducted at "wholesale" produce markets (or farmers' markets). The remaining share is divided between small shops (26%) and shops of other formats (28%) (BBE, 2006). Therefore, the Russian retail sector is still considered to be fragmented and underdeveloped in comparison to Western countries. While supermarkets, hypermarkets and discount stores have sprouted up all over the country, their market share is significantly lower than that seen in most advanced retail markets. One of the trends of the food retail sector is the increasing consolidation based mostly on mergers and acquisitions, and it is expected to continue as some of the regional chains will most likely be absorbed into the Moscow-based retail chains (Bezrukova, 2005). As a result of the increasing consolidation the number of retail chains is decreasing and the turnover of the biggest food retail chains is growing rapidly. The market share of the whole food retail market for the top ten retail chains in Russia constituted 11.1% in 2007 (PMR report, 2008).

As shown in Table 4, the main food retailers in Russia in 2008 were (X5 Retail Group, Magnit, Auchan, Metro, Lenta, etc.).

Table 4. The top 10 food retailers in Russia in 2008

№	Name of retailer	Year established	Country of origin	Format	Turnover, billion Rubles
1	X5 Retail Group	2006	Russia	Multi-format	205.73
2	Magnit	1994	Germany	Discounter	131.72
3	Auchan	2002	France	Hypermarket	128.06
4	Metro	2000	Russia	Cash & Carry	121.93
5	Lenta	1993	Russia	Discounter	53.16
6	O'Kei	2002	Russia	Multi-format	51.57
7	Dixy	1992	Russia	Multi-format	48.33
8	Kopeyka	1998	Russia	Discounter	47.03
9	Viktoria	1993	Russia	Multi-format	39.50
10	Sedmoi Continent	1994	Russia	Multi-format	32.95

Source: RBK Rating (2008)

The development of organized retail has received some further impulses since international retailers entered Russia in 2000. The market share of the top ten retail chains in Russia constituted for 11.1% in 2007 (PMR report, 2008). The retailers operating in Russia could be divided into three main groups: global, national and local. Global retailers such as Metro and Auchan operate not only in Russia but also globally, whereas national retailers represented by X5 Retail Group, Kopeyka, Dixy, operate in Russia and have their outlets all over the country. Though some national retailers such as the X5 Retail Group show a tendency to expand to the neighboring countries such as Ukraine and Kazakhstan. At the same time such local or regional retailers as Asbuka Vkusa, Kora, or Maria-Ra work only in one region, covering a few closely situated cities.

Metro, the largest cash-and-carry operator in Russia, has opened about 30 outlets and has expanded into central and southern Russia and the Urals (A.T. Kearney, 2008). In 2001 the first Metro stores opened in Moscow. The growth has been rampant. Since entering the market, Metro has invested more than 1 billion Euros in Russia. The company uses both large suppliers with nationwide interests in Russia, and smaller suppliers who only operate locally. It helps local companies and agricultural operations in several ways, e.g., by providing free audits. This gives suppliers the opportunity to assess their own standards, with a view to bringing them up to international levels and increasing their own competitiveness.

The French retailer Auchan has exhibited the highest growth of the top 10 retailers jumping to the fourth-largest player at the end of 2007. Auchan started the hypermarket segment in Russia, and initiated changes with entry. Prices set on a low level at 10-15% lower than in other chains (Lorentz, 2003). Auchan opened its first hypermarket in Moscow in 2002. After entering the booming market of Russia, Auchan expanded rapidly: in 2005, Auchan had already 7 hypermarkets operating in Russia, all in the Moscow region (Tiusanen and Malinen, 2006).

McDonald's is by far the biggest fast food retailer in Russia, and one of the oldest, entering the market back in 1990. Russia ranked second out of all McDonald's markets for the average number of consumers per restaurant in 2005 (Food Navigator, 2005). McDonald's share of the market exceeds the total share of all Russian-based fast-food outlets put together: 83 %. An average fast-food outlet in Moscow (be it a restaurant or a mobile stall) serves 300 customers a day. McDonald's capacity is 10 times as great. A typical McDonald's restaurant may serve as many as 2,000 people a day, 60-70% of whom take food outside the restaurant. It now operates more than 175 outlets across the country, with more than 100 in Moscow. Other competitors on the fast food market include Rostick's, Russkoye Bistro, Sbarro, Stop-Top, Kroshka-Kartoshka, Teremok, and KFC, which are amongst the biggest players (Aginsky, 2008).

Many Russian players have demonstrated similar growth rates. In Russia, the international retailers met with an immediate response from local players that were quick to learn modern retail trade methods and forms. Domestic retailers – such as the market leader the X5 Retail Group – are expanding their operations, building strength in their supply and distribution chains, and working on customer relations to capture a larger and more robust share of the market (Belaya and Hanf, 2009d). Russian players continue to dominate the growth of the market headed by X5 Retail Group which had the highest growth rate of all the top-10 players 2007.

X5 Retail Group has emerged as a merger of two retailers Perekriostok and Pyaterochka in 2006. Now the company is in the process of building a solid multi-format foundation to continue its further expansion in the role of the main consolidator of the Russian food retail market. The group plans to develop hypermarket format, with the aim of massive roll-out starting from 2009. The segment of hypermarkets is expected to be the most attractive and

fast-growing in the next five years, which allows enormous room for growth. However, as the inflation hit 11.9% in 2007, after being forecast at around 8%, and food-price inflation being one of the culprits, many retailers have put off some store openings (Business Monitor International, 2008).

However, the poor infrastructure and absence of new technologies remain major challenges for the Russian agri-food business (Glauben, 2011), which result in high logistics costs. The fact that the ability of local producers to penetrate urban markets and compete with international suppliers depends on the quality of the road infrastructure that connects these markets with food-producing areas in the country may considerably hinder the development of food supply chains in rural and peri-urban areas of Russia. Therefore, despite the rapid development of the retail sector, such factors as inefficient distribution network and long distances combined with a poor road infrastructure may disturb the overall trend of the retail growth.

5.4 Summary of Chapter 5

Russia represents the largest and fastest growing retail market opportunity among the CEE economies. Vertical coordination and the resulting managerial challenges can be viewed as one of the most relevant challenges for enterprises which are or want to be active in the CEE countries. Quality can be regarded as the main catalyst of development. Because foreign direct investments (FDI) most often demand higher quality and have significant influence in the food sector, they can be regarded as a powerful source of structural changes in transition countries. FDI can be found at all stages of the supply chain in Russia. As an example of the Russian agri-food business we describe retail business. The most visible sign of growth in the retail food sector has been the rapid introduction and expansion of supermarket chains. Limited and saturated market in home countries combined with favourable conditions for retail trade in Russia cause foreign retailers to expand internationally and explore the new market opportunities abroad, including the Russian market.

The Russian retail market is growing rapidly and attracts foreign retailers, which try to enter the market and export their SCM concepts with them. The example of the Metro Group Russia underlines this point. Since entering the market, Metro has invested more than 1 billion Euros in Russia. Many Russian players have demonstrated similar growth rates. In Russia, the international retailers met with an immediate response from local players that were quick to learn modern retail trade methods and forms. Domestic retailers are expanding their operations, building strength in their supply and distribution chains, and working on customer relations to capture a larger and more robust share of the market.

6. Empirical Study of Russian Agri-food Business (Part I: Telephone Surveys A and B)

In *Chapter 6* we present the empirical part I of the thesis which consists of the findings of two Telephone Surveys (A and B) conducted for the purpose of testing the research assumptions defined in *Chapter 4*. Telephone survey A (from the 19th of October 2009 till the 29th of January 2010) consisted of 40 telephone semi-structured in-depth interviews with the aim to reveal the opinions of experts in the field of the Russian agribusiness (academic and research institutions, politicians, directors and managers of consulting and market research companies, producer and retail associations, foreign retailers, foreign and Russian branded food processors and farmers in Russia) about relationships between international food retail and processing companies and their partners in Russia. Telephone survey B (from 31st of March till the 17th of June 2010) included 97 semi-structured in-depth interviews about relationships of international food retail and processing companies with their suppliers in Russia. The database for Telephone Survey B was obtained from The Chamber of Commerce and Industry of the Russian Federation. It contained 1000 addresses and contact details about the companies of foreign origin registered in Russia as companies operating in the area of food processing and food retailing in Russia with at least 10% of foreign direct investment capital.

The data set obtained through Telephone Surveys A and B was studied by means of content analysis. The data set obtained through Telephone Survey B was additionally studied by means of the function of descriptive statistics of SPSS software. The purpose of data screening was to discover unusual or missing values or other peculiarities and to better study the data set. The main goal of using content analysis is to identify relevant information by categorizing the body of content and, thus, to better describe the message of the material by determining the existing regularities in the body of the text. This approach also allows understanding of the social, relational and emotional background of the study. We identified this method of analysis as the best for analysing and interpreting the results of the data at hand. In the following Sections *6.1* and *6.2* we describe our findings and try to interpret them to the best of our ability.

6.1 Telephone Survey A
6.1.1 Data and Sample

To answer our research questions we conducted exploratory expert interviews with the aim of revealing the opinions of experts in the field of the Russian agribusiness about relationships of international food retail and processing companies with their suppliers in Russia (farmers in the case of processing companies, and processors and fresh produce farmers in case of retail companies). The questions were pre-tested in five personal interviews with experts who were not considered in the following sample. The aim of the pre-test was to test the quality of the formulated questions and to obtain individual reactions to draft materials. The results of the pre-test were used to improve the questionnaire design and contents.

The interviewees were informed about the interviews via email. After receiving their consent the appointments for telephone calls were given at the agreed time. The email contained an attachment with the questionnaire in three languages (English, German and Russian). We deliberately chose to translate the questions into three languages in order to allow a broader spectrum of experts to be involved. To help achieve reliability, the translation of the questionnaire was done by the author and cross-checked by two

colleagues from IAMO, who were also fluent in these three languages and had experience in analyzing in-depth interviews, (Patton, 2002; Hingley, 2005). Due to the fact that the majority of the respondents wanted to be treated anonymously and did not give their permission to tape-record the interviews, the interviews were logged in written form. The information about the survey tool, schedule of expert interviews and the list of interviewed persons can be found in Appendices 1-4.

We made a thorough selection of the interviewees, who were chosen according to their leading positions, in order to effectively gather relevant information (Blankertz 1998; Merkens, 2000; Patton 1990). Specifically, we employed an expert (concentration) sampling (Fritsch 2007; Patton 1990). The persons chosen were in positions with a high level of concentration of appropriate information. The applied technique makes particular sense in view of the abovementioned research questions.

We intentionally used qualitative methods to conduct this survey. We believe that such methods are the most appropriate to study food supply chain relationships, since they allow detailed knowledge and insight to be gained and understood, as well as an explanation of our research questions (Patton, 2002). These research techniques are stated to be especially relevant for conducting exploratory studies with an intention to build theory and allow generalisations of the statements (Miles and Huberman, 1994).

The main motivation behind conducting expert interviews was to explore the current situation in Russia in order to be able to refine our theoretical assumptions at this stage of the research. We observe that international retailers and food processors usually export their business concepts, such as supply and quality chain management. Such companies with FDI are influencing SCM concepts in the Russian agri-food business at all stages of the chain. Foreign retailers introduce their new procurement and management concepts while working with local food processors, as well as directly with producers. International food processing companies impose their management concepts on Russian producers and motivate them to improve the quality of the supplies. At the same time many Russian retailers and processors begin to copy the management strategy of foreign companies, so there is a spill-over effect on Russian management.

The interviews lasted from 15 to 60 minutes. The average duration per interview was about 23 minutes. The overall duration accounted for 910 minutes (or 15.2 hours). Since the questionnaire was offered in three languages (Russian, English and German), some interviewees made the use of the option and chose the language in which they were most secure. As the results show, most of the respondents chose Russian as the interview language (75%). Only 20% chose German and 5% - English.

The biggest share in our sample belongs to business consultancy companies (24%). The interviewees hold very high positions (partners, project coordinators, general directors and business consultants). The next large groups in our sample included retail and food processing companies (15% each). From the retail sector our interviewees included the head of the public relations department of an international Cash & Carry and retail trade operator as well as the general director of a Russian branded meat processing company and retailer. Representatives of the food processing industry in our sample included a business director and a manager in finance and administration from two internationally branded chocolate and confectionary producers, a specialist on operational planning and key account managers from two Russian branded milk processing companies as well as a category development manager of an internationally branded non-alcoholic beverage producer in Russia. Agricultural producers in our sample had a share of 10% and included a general director of Russian beef producing company, a general director of a Russian grain producing company, a general director of a German ingredients supplier for Russian food processing industry, a sales manager of a German seed breeding and producing

company and a senior credit risk manager of an international company trading with agricultural commodities. We also interviewed experts from three producer associations: Russian association of milk producers, Russian association of retail companies and German agriculture association. Also, in our sample we included three professors and one researcher from four academic, higher education and research institutions in Russia and Germany (working on the Russian agri-food business). Further interviewed experts were from market research companies, market research institutions conducting research on the Russian retail sector and policymakers from the Russian State Duma and other international agricultural policy research institutions.

We used the following four blocks of questions in the expert interviews:

(1) Which problems do you think foreign retailers and food processors encounter while working with their suppliers in Russia?

(2) To what extent do you think that foreign retailers and food processors are able to influence their suppliers in Russia to make them comply with their requirements?

(3) What kind of mechanisms do you think foreign retailers and food processors mainly use to make their suppliers in Russia comply with their requirements? Why (or why not) do they use such mechanisms?

(4) Which mechanisms do you think are the most successful for managing food supply chains in Russia and why?

The questionnaire used for conducting the interviews as well as detailed information about the interviews is presented in Appendices 6 and 7. In the next section we will analyse the results of the expert interviews by means of content analysis.

6.1.2 Content Analysis and Interpretation of Results

Characteristics of supplier-buyer relationships in Russia
Conflicts
The main idea of entering a supplier-buyer relationship is to benefit from a "win-win" situation through improved financial and operational performance of each partner, maximizing the performance of the whole supply chain. However, some discrepancies and problems may arise in supplier-buyer relationships despite the intended mutually good effects. The illustration of this principle can be found in the case of supplier-buyer relationships in Russian agri-food supply chains. One of the problems which were mentioned by the experts was the low level of satisfaction of suppliers with buyers. The following example explains this point: "*At the moment one can say that most of the producers dream of being able to supply big supermarket chains. However, retailers do not have the capacity to take all products which producers have to offer. As a result, e.g. out of 90 suppliers only about 10 are chosen by retailers to supply the products. Therefore, the rejected 80 are not satisfied, which leads to conflicts and tension in the relationships among retailers and suppliers.*" Due to the nature of the setting in Russian agri-food supply chains and the number of the available suppliers and buyers, such tension and conflict are probably inevitable. The retailers have a number of suppliers to choose from, which gives them more freedom to develop certain preferences with respect to quality and other criteria of partner selection. The rest of the suppliers, which in this case happens to be a majority, are understandably unsatisfied. Another interesting fact which was mentioned by the interviewed experts are the working conditions of those suppliers which were privileged to enter the relationships with retailers: "*Due to the entrance and preferred shelf-space fees most of the small and medium producers cannot afford to supply the retailers. The competition among the big producers is strong enough, therefore, those who*

have a chance to work with the retailers, fulfil all their caprices.” Therefore, even those small numbers of suppliers which are lucky enough to be chosen by retailers have to cope with some problems like shelf-space fees, etc. In the end, even this small portion of suppliers is also unsatisfied, because of the requirements of the retailers for them. However, another interviewee expressed the opinion that one should not really see the supplier-buyer relationships through the lens of conflict at all. In his view, the tension among the participating parties is not so dramatic. He states: *“I wouldn't say that there are problems in retailer-supplier relationships in Russia. It is more chances and risks. The interests of retailers often are different from those of suppliers; therefore, conflicts of interests appear. Everyone is working for his own purse.”* The next statement indicates clearly that though there are some difficulties in supplier-buyer relationships, they do not represent the typical and the most important feature of the relationship, but rather some natural phenomenon which he compares with marriage. *“One can compare this relationship with that of husband and wife – they quarrel with each other but they cannot live without each other. The same relationship exists between retailers and suppliers.”*

Harmonious relationships
There is another view on supplier-buyer relationships in Russia. According to this view there are also some positive moments about cooperation with retailers. One of the respondents rejected the fact that there were any conflicts at all: *“In general, we do not have any conflicts with suppliers. Conflicts might appear if the supplier and the retailer have different levels of development.”* This respondent happened to represent a well-known foreign branded food processing company in Russia. We admit that he meant that the level of development of his company and its Russian suppliers was not very different. Therefore, no conflicts were noticed. Other opinions about the supplier-buyer relationships were even better. We were told that *“…most foreign companies have very good supplier management”* and *“…are known for their engagement in teaching their suppliers”*. This statement allows us to conclude that foreign focal companies do have the long-term implications of establishing collaborations in Russia in mind. They even invest in the suppliers with which they work with an aim to ensure the improvement of the competence of their partners by teaching them. The next example illustrates that supplier-buyer relationships indeed could be harmonious. The interviewee stated: *“… on an example of the city of Alekseyevka of the Belgorod area I can present a concrete example where a processor on behalf of company Tönnies Fleisch has harmoniously entered the business in socially-economic structure of the region and has developed prospects of development in the form of constructive cooperation with suppliers and consumers.”* The principles of long-term relationships and benefits of investing into the future by being a fair partner are also understood by Russian suppliers. For example, one Russian meat supplier explained to us that he treasures the quality of his products and tries his best to keep it and improve it because he is aware of the long-term goal orientation of collaboration with retailers. He said to us: *“I as a director of the farm understand that I can survive and remain competitive only if I can guarantee the quality of my products. … We are very satisfied with our retailers whom we supply and we do not want to change anything.”*

Problems of working with Western partners
High demands for Russian partners
Continuing the subject of conflicts let us look more carefully at the different sides of supplier-buyers relationships. Some respondents told us that there were some problems in the work with foreign partners. Generally we assume that those partners are represented by foreign focal companies (retailers and processors). On of the first problems mentioned

referred to the high demands of foreign partners towards their Russian partners. We were told that Russian suppliers try to choose medium-sized retailers for their work, since large-scale partners seem to have very high demand on them. One of the interviewees noticed: *"We do not cooperate with big retailers because they are known for their system of entry bonuses. We try to avoid paying such bonuses which are, in other words, briberies. Big retailers in general have very high demands and are difficult to work with, For example, big retailers might return our products to us if they cannot sell them. That is why we prefer working with medium-sized retailers."* In turn, retailers were said to prefer to work with big suppliers. This is an interesting trend, which could be explained by the attempts to improve the efficiency and reduce transaction costs. More detailed information was provided to us in the following statement: *"Chains are working mostly with big suppliers because it is easier for them to organize the production and to ensure big standardized deliveries of products with similar size and characteristics."*

Poor knowledge of the Russian market and culture
Another problem which was mentioned to us was the insufficient level of knowledge of Western partners about the Russian market. One respondent expressed this idea exactly to the point: *"The problems of foreign companies in Russia include: the poor knowledge of the Russian market, the way business is done in Russia, the cultural and country-specific differences."* One of things which were considered to be of importance and was still to some extent missing was the knowledge of the cultural specifics of the Russian market. The elementary thing is the knowledge of the language and personnel who are able to communicate with and understand the local partners. One of the respondents remarked: *"... it is of an advantage to know the language not having to use an intermediary all the time. But speaking the language does not mean automatically that you understand the culture and mentality. They need people who lived both in Russia and abroad who understand both cultures. And I do not think that there are many such people."* The next big block of problems connected to poor knowledge of the Russian market and culture addressed the issue of the Russian consumer profile. Apparently, some Western companies did not have enough knowledge about the actual consumer preferences in Russia. Especially eating culture was said to be very important. Several interviewees highlighted this fact. One of the respondents said: *"...some foreign food processing companies come to Russia and think that Russian consumers are the same as European. But Russian people have a different taste and different eating culture. So these things are sometimes not considered."* Another respondent also supported this opinion by stating that *"...Russian consumers are different from those in Germany. In Germany people like to buy cheap products and like discounters. In Russia people like to be seen in big expensive supermarkets where they buy expensive products because it adds to their prestige."* Therefore, these examples illustrate the fact that Western companies are not perfectly equipped with knowledge of the market when they enter it. They still lack the knowledge about the local settings.

Lack of flexibility and adjustment of management style to local conditions
The next relevant problem in the work of Western companies in Russia is the lack of flexibility and adjustment of management style to local conditions. This certainly represents a disadvantage for foreign companies. For example, one of the respondents stated: *"Foreign retailers are different from Russian ones in the way that they are much more conservative and cannot easily react to the changing situation. Russian companies are like repair shops or potteries – they are more flexible and can adjust easily to a new environment. The classical example of a conservative company is Carrefour. It is known*

for its strictness and absence of flexibility." Other interviewees told us about some other examples of Western companies which were not successful on the Russian market due to the lack of flexibility (Ritter Sport was one of them): *"…this is all because of the lack of flexibility of some Western companies. Ritter Sport wanted to do it exactly in the same way as in Germany, but they did not make correction towards the Russian business environment."* The strategies and management concepts were assessed as good, but they also needed to be adjusted to the Russian conditions and to the realistic requirements. One very illustrative statement was given to us by an expert on Russia from a market research company. He concluded: *"…you cannot just get into the country and do the business the way it is done in France. You have to take into consideration what people want to have, how they want to have it. It is different in France, it is different in Germany, just like it is different in Russia and in Poland."*

Problems of working with Russian partners
Quality of agricultural supplies
According to the opinion of most of our interviewees in Russia one cannot speak about the responsibility and quality guarantee along the value chain, because very often the raw product suppliers cannot hold elementary quality standards. The quality of products is still lagging behind, as shown on the example of raw milk: *"...the share of the 1st class quality raw milk represents in the central part of Russia about 80-90% of all milk delivered. But for the whole Russia the share of 1st class quality raw milk is only 5% of the all milk."* The most important question for international retailer and food processors in Russia was said to be "Where do we get the supplies of this specific quality?" So there are discrepancies between the expectations of the retailers and processors and the quality of the supplies which Russian suppliers can offer. One of the respondents made it clear: *"The biggest problem with Russian suppliers is the insufficient quality of the raw supplies. They cannot deliver the quality which the market requires, or maybe only partly."*

Quality of agricultural production in Russia was pronounced to be a many-sided problem. The quality of products is determined by conditions of production. It depends on the types of plants and structure of the cattle, skilfulness of application of agricultural techniques, climatic conditions, know-how, terms and methods of conducting the work, etc. All these factors have direct influence on the quality of production and conditions of storage of agricultural products. It was stated that some Russian suppliers have low production efficiency, low profitability, low level of technical modernization (absence of cooling tanks in case of milk, etc.), which is due to the lack of capital and financing. One of our interviewees told us: *"In Russia it is very often the case that the conditions of the production do not allow for a certain quality known in Germany. I know one beef producer who grows German Fleckvieh. There is no possibility to slaughter the cattle over 500 kg, whereas the quality of the beef meat from Fleckvieh shows only begins with 650-700 kg cattle".* Besides that, we were told that Russian suppliers cannot standardize their production with their work with retailers. Chains are working mostly with big suppliers because it is easier for them to organize the production and to ensure big standardized deliveries of products with similar size and characteristics. Suppliers often do not have access to credits and capital. So in order to work with them one has to attract foreign capital to invest into the production facilities of suppliers. One of the experts concluded that *"...the product and process quality of Russian suppliers does not correspond with the standards of Western retailers and processors."* In fact, Russian suppliers are considered not to be able to afford such standards partly because of existing infrastructure problems.

Russian management style

The problem of quality is also connected to the Russian management style and mentality. Russian suppliers were said to lack of professionalism in general, which resulted in the absence of readiness to have long-term relationships. We were also told that they do not understand this completely and the quality management is not very well developed yet. One of our interviews said *"The biggest mistake which foreign companies make is when they rely on the fact that the production process of Russian suppliers will be the same as in the beginning when they just received new equipment. In order to guarantee quality you have to control and monitor suppliers on a regular basis, otherwise they will be tempted to steal or economize on something and not to conduct the whole process as it is required."* However, the lack of professionalism is seen not only in relationships with suppliers but also with Russian retailers: *"The work with foreign supermarkets differs from that with Russian partners in the way that foreign supermarkets have better working ethics and management systems. Russian supermarkets may sometimes surprise us with additional conditions not stated before."*

Russian agri-food companies sometimes also have unsatisfactory distribution of tasks among different departments in the company. Very often the financial and management department is not informed about the current state of agricultural work on the field and does not know what to do. We were told that they have little or no idea about the state of the quality of the produced goods and make wrong management and investment decisions and that in most firms the marketing and production functions are organizationally separated. One of the interviewees stated that although Russian partners do their best to organize their work, it is not enough. He told us: *"…we can very well manage just-in time delivery, but our trucks may end up waiting for many hours to be unloaded in the yard of the retailer."*

Opportunism, unreliability and absence of trust

There is also a problem of opportunistic behaviour, unreliability and absence of trust among Russian suppliers. Normally if a producer behaves opportunistically and for some reason just changes the partner against the agreement, than he will have very negative consequences: no one will ever work with him. Therefore, producers in developed countries try to keep a good record and have a reputation of a reliable partner. Russian suppliers sometimes are not aware of this fact and may all of a sudden leave for other buyers which offered a better price. According to our interviews Russian suppliers have little or no loyalty and commitment. They leave whenever they find better conditions without thinking about long-term relationships. One of the statements illustrates this point: *"This is one of the specific features of the Russian market – one cannot say that Russian suppliers are equivalent to the German or French suppliers. They are less reliable."*

Another problem is fulfilment of delivery terms. We were told that they are often not kept. Russian companies often are less reliable than foreign in terms of delivery terms. On of the experts remarked: *"In Russia people have very often a different understanding of the concept of punctuality and discipline."*

They do their best to organize their work, but sometimes it is not enough. According to one of our interviewees these aspects of behaviour of Russian suppliers are reflected in the way of working with Russian suppliers: *"For example, if Westphalia sells milk carousel to a Russian dairy farm, it has to wait until it gets the payment and then install the equipment, otherwise it may end up running after its money for a long time. The same is with German retailer in Russia Metro. Normally you can not pay the suppliers earlier then when the goods are delivered and are waiting in the truck in the yard."*

This fact is also connected to the catastrophically low level of trust. We were told that in Russia people have been cheated already so many times that they do not trust anyone at any conditions. Russian farmers are found to be extremely suspicious and to think that foreign companies want to gain something at their expense. It seems like doing business in Russia requires building friendships. And without trust you cannot have a good and long-lasting relationship. But on the other hand, foreign companies will not be able to maintain the desired level of supply chain performance by building trust alone. We were told that it is advisable to monitor the activities of Russian suppliers very carefully, "*…otherwise they will be tempted to steal or economize on something and not to conduct the whole process as it is required.*"

Administrative barriers, logistics and infrastructure problems

We were told that in Russia administrative barriers, logistics and infrastructure problems represent another big block of problems faced by retailers. There are many different kinds of documents and payments which must be dealt with and gathered before one can open a store. Besides, Russian bureaucracy, corruption, unpredictability, high rents and costs of electricity, etc. often make it difficult for foreign companies to conduct business in Russia. Some of the problems of big supermarket chains include problems of logistics and geographical location. Often supermarkets and production facilities are situated quite far from the farms with producers situated in Moscow Oblast or even other oblasts. Such suppliers must have special cooling equipment for their goods and a very strict schedule in order to deliver on time and at the required quality level. Big distances from production to processing sites and high rents in the centre of Moscow are also stated to be the obstacles for foreign focal companies: *"There are 7 Auchans outside the Moscow city ring and 1 inside. It is connected with the high area rents inside the ring since it is closer to the centre. Accordingly such supermarkets are quite far from the farms and producers situated in Moscow Oblast or even other oblasts."*

Another part of the problem is that due to the structure of agricultural producers, a large part of production comes from small individual households. It makes it difficult for international food processing companies to collect, e.g., homogeneous quality milk and meat from them. Such sectors as, for example, meat are especially difficult. There are only a few really well-organized meat producers. Most of the meat producers are small- and medium producers, which have only limited production capacity. They cannot deliver a wagon of meat, but only as much as they have. Therefore, they cannot supply big processing companies.

Power in Russian supply chains
Existence and distribution of power

Retailers are the most powerful in the supply chain because they have direct contact with consumers. Since retailers have a lot of suppliers to choose from, they may dictate their terms of trade. Nowadays, the power is on the side of the retailers. All suppliers dream about working with a big retailer. Agri-food suppliers in Russia have no or very little power over retailers. This is connected with the competition among the suppliers. Retailers offer very attractive ways of selling their products to suppliers and have direct contact to consumers. They often have more information on consumers' preferences and demand. Our interviewee from the retail sector said: *"I would say that we have power parity, since there are also some big branded processors which have no less power than retailers."*

With respect to producers one can say that power is in the hands of the processors. There are several reasons for that. First of all, the processors represent a very important channel for agricultural products. Since producers cannot process, they are dependent on processors

to buy their agricultural products on time and at a good price. One of our interviews remarked: *"Can you imagine, if the producers produce their milk and cannot sell it? They have to have reliable processors which will buy their milk and market it further."*

Power of suppliers differs depending on the status of the supplier. When it is a preferred supplier he has more power than a small and unknown supplier. Power is generally said to be in the hands of retailers, though some big branded international as well as Russian processors might also have a lot of power over the retailer.

Sources of power

We also asked our interviewees about where they think the power actually comes from. Among the answers were: access to the market; number of alternative buyers or suppliers; access to resources; switching costs; size of the company; expertise in management and logistics systems; good connections with administration. One of the interviewees said that the following principle is at work in the dairy industry *"he who has access to the market, he has the power"*.

Another opinion is competition. If there are many suppliers and few buyers – the classical illustration of the model of Porter – then the buyers have more power. If it is the other way around then the suppliers have more power. In other words, the bigger the number of the agents, the higher is their bargaining power. Since there are more suppliers than processors and retailers, suppliers have less power.

The next condition of having power was mentioned to be access to resources. One of our interviewees stated: *"Power has anyone who has access to critical resources. Even the seller of theatre tickets will apply his power on you, because you do not have what he has. The same situation is in the food industry. If you have a resource which others do not have and would like to have, it gives you power."* Those companies which have capital and financial resources are more powerful. Foreign companies have a better chance to attract foreign banks; therefore, they become more powerful than Russian companies with insufficient financial resources.

Another condition of having power is dependence. After establishing long-term relationships, both partners become dependent on each other due to developed working systems, commitment, etc. They cannot exchange the partner right away, which makes them vulnerable and less powerful.

All of the mentioned conditions of bases of power were found to be consistent with the classification of power according to French and Raven (1959). For example, access to the market and the number of alternative buyers or suppliers are evident bases of legitimate power; size of the company and good connections with administration reflect the possession of referent power; expertise in management and logistics systems is a clear base of expert power; access to resources could be regarded as a base of reward power.

Use of influence strategies in supplier-buyer relationships in Russia
Existence of influence strategies

We were told that in Russia there is a system of bonuses and fees which retailers use with their suppliers. Retailers take a payment for each assortment position, or SKU (Stock Keeping Unit). Sometimes other terms are used instead of SKU, but the essence of calculations with suppliers is the same. One of our interviewees told us: *"International milk processors are using a system of sanctions for bad quality milk and for insufficient volume of delivery. There are two very common mechanisms for punishing the supplier: to cut the price and to terminate the relationship."*

Another interviewee explained to us how the mechanisms of punishments and rewards are used on the example of milk: *"Actually suppliers of milk are already used to indirect*

sanctions and punishments. For example, depending on the number of bacteria in the milk they are paid according to the quality classes. ... if the farmer wants to get more money, it is motivated to deliver better quality milk." With regard to using information exchange as a means of influencing the suppliers we were explained: *"Under no conditions can the key information be shared in Russia. This is a rule – no one shares the information – regardless of the status the relationships have."*

We were able to classify the mentioned mechanisms which were mentioned by the interviewees according to the framework of Hunt and Nevin (1974):

(1) *Coercive influence strategies* (cutting the price; terminating the relationship; delistings; fines; payments for accommodation of the goods on a shelf; replacement of Russian operators due to a difference of credit rates; establishment of an economic pressure in process of achievement of a monopoly position; long period of payment from retailers for delivered goods (between 45 and 120 days); obligation of the supplier to pay the "entrance ticket"; compensation to the retailer in case of robbery in the supermarket; obligation of the supplier to lower the price during the time of promotions and discount periods in the supermarket; obligation of the supplier to pay the costs of exchanging the goods from the shelves of the supermarket in the case of low demand by consumers; obligation of the supplier to pay the costs of advertising in the mass media and promoting the goods; providing to the retailer the monitoring of the prices for the specific goods in the region);

(2) *Non-coercive influence strategies* (written contracts; lobbying of interests through power structures at a legislative level; negotiations and discussions; investments into the production and cooling equipment; financial assistance to producers in the form of credit or leasing; assistance programs with farmers to guarantee the quality of the products; trainings and educational activities; attractive terms of payment, quality audit; regular controls our production process; financial support and technical assistance programs for suppliers; transfer of know-how and innovative technologies.)

Effects of using influence strategies for supply chain management

With regard to the effect of some mechanisms on relationship, our interviewees recommended using specific mechanisms for establishing long-term relationships to us and others to achieve better coordination in the chain. We were told that in Russia it is not recommended to rely on promises made in an oral or informal way. Everything has to be written down in order to make sure that the contractual arrangements will be fulfilled. Such mechanisms as emotional appeals do not function in Russia. People are motivated by a full purse and financial stimulation. Only if people know that they will have price cuts for insufficient quality or non-punctual delivery, will they follow the rules of the game. As far as educational and consulting activities are concerned, Russians need to be accompanied at all steps of the projects. Consulting services should really be project-bound and constant. The same is true for monitoring of Russian producers' activities. In order to make sure that everything goes well, foreign partners need to check and watch the development from the very beginning. In that case Russian producers also appreciate international companies which offer assistance and are always there for them at any stage of the project.

Such mechanisms as threats and penalties were considered to not be very effective because they show that the company has aggressive intentions. One of our interviewees from the retail sector said to us: *"We do not use any coercive means such as threats, sanctions or fines, because they do not allow us to reach our goal, which is to have long-term relationships with our suppliers. Any kind of coercive measure may destroy the motivation of the suppliers, therefore we use other worked out management approaches with our suppliers, but not punishments."* One representative of a Russian supplier company told us that they do not cooperate with big retailers because they are known for their system of

entry bonuses. The supplier tried to avoid working with big retailers because they demanded paying bonuses which are, in other words, briberies. Big retailers are said to have very high demands in general and be difficult to work with. For example, big retailers might return the products to the supplier if they can't sell them.

Another recommendation with regard to the use of mechanisms states: *"Through contracts the buyer can guarantee the trade conditions and can punish or go to court if the conditions of the contract are not fulfilled. But the most reasonable thing would be to try to understand why the supplier cannot fulfil the certain terms of the contract and try to support it through consultation and educational activities. I think that punishments and threats are not successful in building long-term partnership."*

Such mechanisms as bonuses and business talks seem to be more effective for maintaining a harmonious relationship. Identification with the company as well as approval or disapproval of actions was explained to be not very efficient in Russia due to the Russian mentality. Collaborative discussion, persuasive arguments, educational activities or qualification opportunities were told be used for suppliers which are motivated and interested in long-term work. Such mechanisms as financial support and technical assistance programs for suppliers, transfer of know-how and innovative technologies were reported to be successful for creating long-term relationships with suppliers. In order to control suppliers in Russia the penalties and fees might be effective in the first moment, but they do not solve the problem at its root. One needs to investigate why this supplier cannot fulfil its contractual obligations.

6.1.3 Discussion

Before conducting the expert interviews we defined some questions about supply chains and networks and their management in the Russian agri-food business, which we would like to answer now that we have the results of the survey. Among the questions we raised were:

- Are there any problems in relationships among Western (foreign food processors, retailers) and local partners (suppliers, food processors, retailers)?
- Are there any difficulties in managing supplier-buyer relationships with regard to coordination and cooperation?
- Can the concept of SCM be seen through the lens of cooperation (alignment of interests) and coordination (alignment of actions)?
- If yes, do the problems of cooperation (alignment of interests) differ from the problems of coordination (alignment of actions)?

The results of our study indicate that supplier-buyer relationships in Russia can be characterized by conflicts as well as by harmony. The problems of working with Western partners were divided into the following categories: high demands for Russian partners, poor knowledge of the Russian market and culture, lack of flexibility and adjustment of management style to local conditions. We found out that the interests of retailers often are different from those of suppliers; therefore, there appear conflicts of interests. One of the tensions in such supplier-buyer relationships is the rigid behaviour of retailers towards their suppliers mostly due to choosing preferred suppliers and requiring high shelf-space fees. The interviewed experts complained that foreign companies working in Russia often have a disadvantage of not knowing how business in Russia is done as well as cultural and country specific differences. We were told that foreign companies often overestimate their knowledge of the Russian consumers' preferences. They try to sell food products which are not necessarily preferred by the consumers in this country. Therefore, we would

recommend the companies wanting to enter Russia obtain this valuable knowledge before starting to work there. In addition, foreign companies were accused of not being flexible enough for Russian conditions. Some examples were mentioned such as Ritter Sport and Carrefour, which were not successful on the Russian market. According to the interviewed experts the reasons for their failure was their conservative trading policy, which was not properly adjusted to the local tastes and conditions of the market.

However, Western partners in turn also had problems working with Russian partners, which we specified as follows: insufficient quality of agricultural supplies; Russian management style; opportunism, unreliability and absence of trust; administrative barriers, logistics and infrastructure problems. One of the biggest problems mentioned was the poor quality of raw materials and supplies in Russia. Some experts explained to us why. Partially this is due to the condition of production and lacking technological equipment. Therefore, it was not possible to attain the quality of raw milk using the installed outdated milking equipment. The slaughtering of the cattle was possible only for limited weight, which was the main issue in the qualitative characteristics of the end product. However, another reason for bad quality supplies is also the personnel and the management style in the Russian agri-food business. We were told that it was necessary to monitor the activities of Russian partners very closely at each step of the production process, since Russian managers were not reliable enough to be able to conduct the business in the appropriate way independently according to the terms agreed with foreign partners.

On the other hand, supplier-buyer relationships in Russia were described to us as being harmonious. It is obvious that the level of development of suppliers with regard to managerial working ethics is improving. Therefore, many Russian suppliers begin to realize the advantage of working with foreign retailers.

This study showed that the problems of managing Russian suppliers do indeed exist. However, it was not possible to determine whether the difficulties could clearly be seen through the lens of cooperation (alignment of interests) and coordination (alignment of actions) and whether the problems of cooperation were different from the problems of coordination. We conclude that further research is needed in order to find out more about these issues. The respondents of this survey were experts from different fields. Further research with more involvement of real managers from companies in Russia could shed more light on these matters.

Before conducting the expert interviews we also defined some questions about the role of power in the Russian agri-food business:
- Does power exist in supplier-buyer relationships at all in Russia?
- If yes, how is power distributed among supply chain actors and why?
- Which supply chain actors possess more power than the others?
- What are the sources of this equal/unequal power distribution?
- Can power or its sources be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974)?
We will now try to formulate the answers to these questions based on the results of the conducted expert interviews.

Our findings indicate that power was indeed identified by the majority of our respondents. We were told that it may originate from access to resources; number of alternative buyers or suppliers; switching costs; size of the company; expertise in management and logistics systems; and favour of or good connections with administration; access to the market. These findings are consistent with the classification of French and Raven (1959). In general the power in the supply chain is increasing the closer it gets to the end consumer. One can say that power is generally in the hands of retailers, though some big branded international as well as Russian processors might also have a lot of power over the retailer.

Since retailers have a lot of suppliers to choose from, they may dictate their terms of trade. All suppliers dream about working with a big retailer. Agri-food suppliers in Russia have no or very little power over retailers. This is connected with the competition among the suppliers. Retailers offer very attractive ways of selling their products to suppliers and have direct contact to consumers. They often have more information on consumers' preferences and demands. However, the power of suppliers might differ depending on the status of the supplier. When it is a preferred supplier, he has more power than a small and unknown supplier.

We also would like to suggest some answers to the research questions which were formulated with regard to the use and role of influence strategies for SCM in the Russian agri-food business. To remind you, here are the research questions:

- Are influence strategies used to manage SCM?
- If yes, can they be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974)?
- What influence strategies are used more often and which ones less often or not used at all and why?
- What is the perceived effect of using certain influence strategies for SCM?

We were told that bonuses often have a hidden character. For example, retailers do not offer suppliers a direct financial bonus, but rather special assistance, services or privileges. They could offer them the status of a preferred or leading supplier or provide a special favourable shelf space for their products. With regard to the effect of some influence strategies on relationship, our interviewees recommended using specific influence strategies for establishing long-term relationships and others for achievement of better coordination in the chain. We were told that such influence strategies as threats and penalties are not very effective because they show that the company has aggressive intentions and might destroy the motivation of the partners. On the other hand, coercive influence strategies are widely used in Russia and could often have a hidden character. Non-coercive influence strategies must not necessarily include a direct financial bonus, but rather special assistances, services or privileges like a status of a preferred or leading supplier or a special favourable shelf space for their products.

The managerial implication here is that the actors gaining power from other parties must recognize that these actors still have some power that can be used opportunistically. Thus, knowing these sources can help to work out the influence strategies to deal with this behaviour.

Furthermore, using influence strategies does not always mean that coercive actions have to be taken. Instead knowing that influence strategies might include rewards might lead to a change in behaviour enhancing cooperation. This is particularly valuable because chain management is both the alignment of actions as well as the alignment of interests. We do not specifically suggest which combination of influence strategies is appropriate, but we advise supply chain managers to be very cautious in choosing the appropriate influence strategy and adjust it to the problem of setting strategic goals.

We found out that retailers' interests are often different from those of suppliers; therefore, there appear to be conflicts of interests. Our interviewees indicated that relationships of foreign retailers and food processors with their suppliers in Russia could be characterized into the following groups of problems: quality of agricultural supplies; Russian management style and mentality; opportunism and absence of trust; administrative barriers, transport, logistics and infrastructure problems. The findings regarding the research assumptions are summarized in Table 5.

Table 5. Findings from Telephone Survey A regarding the research assumptions

Research assumptions	Fully confirmed	Partially confirmed	No information
A1: Problems in relationships among Western and local partners exist.	x		
A2: Problems of managing supplier-buyer relationships can be grouped into problems of cooperation (alignment of interests) and coordination (alignment of actions).			x
A3: Power exists in supply chains and networks.	x		
A4: Power is asymmetrically distributed among actors in supply chains and networks.	x		
A5: The closer the supply chain actor is to the consumer along the supply chain, the more power he possesses (retailers are the most powerful, etc.).		x	
A6: Power can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974).	x		
A7: Influence strategies are used by focal companies for supply chain management.	x		
A8: Influence strategies can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) /Hunt and Nevin (1974).		x	

Source: own accomplishment

Our empirical findings indicate that power may originate from access to resources; number of alternative buyers or suppliers; switching costs; size of the company; expertise in management and logistics systems; and favour of or good connections with the administration; access to the market. These findings are consistent with the classification of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974). In general the power in the supply chain is increasing the closer it gets to the end consumer. One can say that power is generally in the hands of retailers, though some big branded international as well as Russian processors might also have a lot of power over the retailer. The summary of findings of the conducted expert interviews can be found in Appendix 5[9].

6.2 Telephone Survey B
6.2.1 Data and Sample

To answer and test our research assumptions we conducted a second round of telephone semi-structured in-depth interviews about relationships of international food retail and processing companies with their suppliers in Russia. As mentioned at the beginning of *Chapter 6*, this time we contacted the companies of foreign origin registered in Russia as companies operating in the area of food processing and food retailing in Russia with at least 10% of foreign direct investment capital. A total of 97 complete telephone interviews were conducted, which represents the response rate of 9.7%. We made a thorough selection of the interviewees who were chosen according to their leading positions in order to effectively gather relevant information (Blankertz 1998; Merkens, 2000; Patton, 1990).

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[9] For more detailed research findings of Telephone Survey A please refer to Belaya and Hanf (2011c).

Specifically, we employed an expert (concentration) sampling (Fritsch 2007; Patton 1990). The persons chosen were in positions with a high level of concentration of appropriate information. The applied technique makes particular sense in view of the above mentioned research questions.

Before contacting the companies from the database we made a thorough pre-test study of by contacting 15 experts from the field of agri-food business and conducting telephone conversations with them. This pre-test allowed us to identify potential problems and to revise the proposed questionnaire before starting the actual fieldwork. We started the survey after receiving their feedback and improving the questionnaire. The questionnaire was designed in 3 languages (Russian, English and German) in order to allow the experts speaking different languages to participate in the questionnaire. The translation of the questionnaire was made by the author and cross-checked by two colleagues from IAMO, who were also fluent in these three languages and had experience in analyzing in-depth interviews, to help achieve reliability (Patton, 2002; Hingley, 2005). The interviewees were first informed about the interviews via email. After receiving their consent, the calls were given at the time appointed by the interviewees. Due to the fact that the majority of the respondents wanted to be treated anonymously and did not give their permission to tape-record the interviews, they were logged in written form. The information about the survey tool, schedule of conducting expert interviews and the list of the interviewed persons can be found in Appendices 6-8.

The survey tool contained three main sections (Section I: Mechanisms for managing agri-food supply chains; Section II: Problems of managing agri-food supply chains; Section III: Information about the interviewee and his business partners). The questions were presented grouped according to the thematically connected blocks within each section.

We applied the four-point Likert scala (e.g., frequency of use of influence strategies: 1 – "not at all", 2 – "seldom", 3 – "often", 4 – "very often"; the state of satisfaction with coordination and cooperation aspects: 1 – "very dissatisfied", 2 – "dissatisfied", 3 – "satisfied", 4 – "very satisfied"). The answer option "don't know" was also given in order to increase the reliability of the answers. One of the first question which was asked was "Do you feel responsible for coordinating the supply chain of this product ("from the field to the fork")?". Two answer options were given: "yes" and "no". We selected the focal companies which were the target of our research with this question.

Among the interviewed companies were two types of companies: processors (89) and retailers (8). Since the questionnaire was offered in 3 languages (Russian, English and German), some interviewees made the use of it and chose the language in which they were most sure. As the results show, most of the respondents chose Russian as the interview language (97%). Only 2% chose English and 1% - German. Duration of interviews was between 10 and 45 minutes. The average duration per interview was about 16 minutes. The overall duration accounted for 1534 minutes (or 25.5 hours) (Appendix 8).

The companies from our sample stem from a variety of different Western European and North-American countries. Altogether, the head offices of the companies originate from 27 different countries. The biggest share among the interviewed companies comes from Germany (21.65%).

There are indeed a large number of German companies operating in Russia in different supply chains. Therefore, the number of companies which replied to our invitation to participate in the expert interview was also high. The next big group after Germany is the USA. Again, the number of available companies from this country made it possible for so many of them to reply positively to our invitation. Some other important big groups are from France, the Netherlands and Italy. Also Asian countries (China and Singapore) were included.

The majority of the companies called were from Moscow and the Moscow region (81%). The rest of the cities included St. Petersburg (8%) as well as some other Russian cities (Samara, Belgorod, Velikiy Novgorod, Novosibirsk, Kaluga, Kaliningrad, Pskov, Tula). In two cases where the respondents were not able to participate in the expert interview, they recommended that we contact their head offices in Warsaw (Poland) and St. Wendel (Germany). However, the respondents were all well informed about the situation of their company in Russia. Among the respondents were general directors, sales managers, category managers, logistics managers, quality and supply chain managers.

The interviewed respondents chose only one supply chain to report on. We had 13 different supply chains in our sample. The most frequently chosen were dairy products (15.5%), vegetable products and plant oils (13.4%), sweets and confectionary products (11.3%) and bread and pastry products (11.3%).

One may judge us with regard to the homogeneity of our sample since it consists of many different countries and studies different supply chains. It is possible to assume that each of these countries has its own strategy while working with Russian suppliers. Also the strategy could be different depending on the kind of supply chain. It would have been better to have companies from the same country representing the same supply chain in order to avoid heterogeneity of the sample and make sure that the overall understanding of the concepts of SCM and influence strategies at least is not affected by the cultural differences and possibly by the specifics of different supply chain products.

The problem with this suggestion is that the number of such companies is limited. From the initial number of companies in our database, we found that only a portion was ready to participate in our survey. Another problem during the contact efforts were discrepancies in the given addresses and telephone numbers. Apparently some of the registered firms in the database had changed their contact details by the time we got a chance to contact them. Therefore, in order to guarantee that we have a sufficient number of responses we contacted all available companies which identified themselves as "focal".

We have deliberately chosen Russia since many foreign companies invested this competitive market in the past years.

6.2.2 Descriptive Data Analysis

Coordination vs. cooperation
Generally the results of satisfaction with certain aspects of coordination and cooperation were slightly different depending on whether they were answered with respect to suppliers or buyers. As for coordination aspects, the average share of those who were "satisfied" and "very satisfied" amounted to 84% in relationships with suppliers and 86% in relationships with buyers. As for cooperation, the level of satisfaction ("satisfied" and "very satisfied" together) was almost the same in both kinds of relationships (80,6% with suppliers and 80,8% with buyers). Generally the number of those who were not satisfied with the aspects in coordination and cooperation was quite low. The main findings of descriptive analysis are graphically shown in Figure 11.

Figure 11. Average level of satisfaction with coordination and cooperation, in %
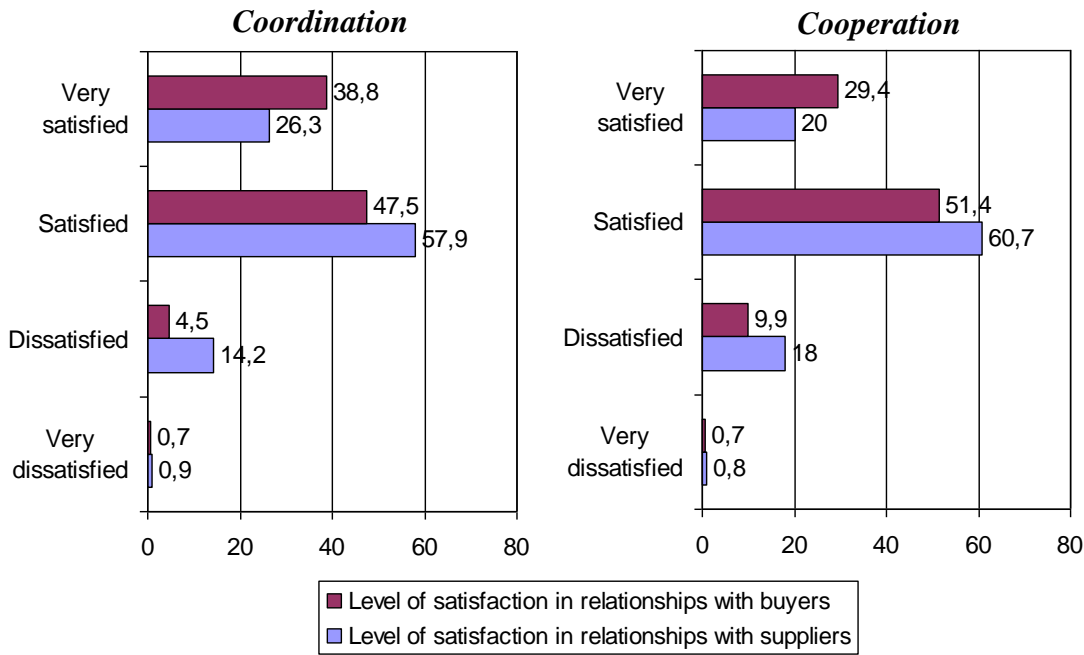
Source: own accomplishment

But still some areas of coordination and cooperation were apparently in such a state that the respondents were less satisfied with them in comparison to other areas of SCM. These aspects are *accuracy of provided information about the next steps of collaboration* and *prevention of withholding or distorting information.* These two aspects of cooperation seem to cause the most problems (between 20 and 38% of the respondents were dissatisfied with the state of these areas of cooperation with their partners). We could also observe that the number of the respondents who were dissatisfied with these areas of SCM in relationships with their suppliers (36-38% of the respondents were dissatisfied) was higher than in relationships with buyers (approx. 20% of the respondents were dissatisfied). Another area of cooperation which signalled the most dissatisfaction of respondents with their suppliers was *prevention of violation of contractual or relational norms* (over 20% of the respondents were dissatisfied).

The most problematic areas of coordination (also with respect to suppliers) turned to be *synchronization of logistics processes, timeliness and completeness of deliveries or orders* and *knowledge about managerial decision making concepts* (between 18 and 27% of the respondents were dissatisfied). After reviewing these facts we see a tendency that the relationships with suppliers tend to be more problematic that relationships with buyers. It seems that suppliers have less knowledge about the decision-making concepts of their partners and have problem with logistics and timeliness and completeness of deliveries. Buyers have fewer problems in these areas. An especially difficult area of cooperation, which the majority of respondents could not manage very well, was the prevention of opportunistic behaviour, mostly from the side of suppliers (violation of contractual and relational norms and withholding information).

Frequency of use of influence strategies

According to the results of the descriptive statistics coercive influence strategies generally tend to be the less often used kind of influence strategies, since over 70% of the given answers in both samples belonged to the categories "seldom" and "not at all" (Appendix 9). The results of the quantitative analysis of the asked questions with regard to the

frequency of use of certain influence strategies show that some coercive influence strategies are used less often than others depending on the "softness" of their expected effects. For example, *supervision or monitoring of your partners' activities* is very well known among the respondents with respect to relationships with suppliers (0% answered "don't know"). Apparently, the respondents tend to use this influence strategy more often with suppliers (33% answered "often") than with buyers (12.4% answered "often"). Also, more than the half of the respondents answered that they do not use this strategy with their buyers at all. This fact allows us to conclude that there is probably less need to supervise or monitor the activities of buyers than the activities of suppliers. Another interesting fact is that *threatening to invest less into the business relationship* is the least used influence strategy among the other coercive influence strategies. In both kinds of relationships (with suppliers and with buyers) more than 90% of the respondents told us that they do not use this strategy at all or use it seldom. Similar answers were received with respect to *Warning to cancel the business relationship*. The percentage of the respondents who stated they did not use this strategy or seldom use it was over 80% (with slight differences between relationships with suppliers and buyers). Also such strategies as *lowering discounts or other commercial rewards* and *monetary penalties* were also not very well practiced in comparison to the other influence strategies (at least 79.4% of the respondents answered that they do not to use this strategy or seldom use it). Since the number of those who answered "don't know" is 0% in the case of suppliers and 8.2% in the case of buyers, we can conclude that these strategies are not used so often on purpose.

As for the reward influence strategies, over 70% of the given answers with respect to relationships with suppliers and over 80% of the given answers with respect to relationships with buyers belonged to the categories "often" and "very often". In fact, this kind of influence strategies was the second the most widely used (after informational influence strategies). We could observe that between 46 and 77% of the respondents answered that they use this strategy often. One influence strategy which seems to be used less often than the other ones is *financial assistance programmes.* 66% of respondents answered that they do not use this strategy at all o use it seldom with respect to their suppliers and 79% - with respect to their buyers. Probably the costliness of this method could be the reason why this influence strategy is not used by so many respondents.

One of the remarkable things about the use of expert influence strategies is the fact that over 50% of the answers in both samples belonged to either the category "seldom" or "not at all". This fact tells us that expert influence strategies are just as seldom used as legitimate, and a little more often than coercive influence strategies. Also, more than 90% of the respondents stated that they do offer *work-skills training, workshops, seminars or other educational activities* or offer them seldom. The number of those not offering such educational activities to their buyers was higher than those not offering such educational activities to their suppliers. Other expert influence strategies were used more or less often, whereas the number of respondents using those strategies with their suppliers was higher (between 59 and 61%) than with their buyers (between 44 and 47%).

According to the results of the descriptive statistics informational influence strategies were the most often used kind of influence strategies, since over 70% of the given answers with respect to relationships with suppliers and over 80% of the given answers with respect to relationships with buyers belonged to the categories "often" and "very often". Therefore, one can conclude that this kind of influence strategies turned out to be the most popular among the respondents. *Discussing the overall strategy of operations* and *negotiating a common agreement* were used more often than the other informational influence strategies (between 46 and 59%). Other informational influence strategies were used in such a way

that the number of respondents using those strategies with their suppliers was higher (between 50 and 54%) than with their buyers (between 38 and 41%).

Over 50% of the answers about the use of legitimate influence strategies in both samples belonged to either the category "seldom" or "not at all", which leads us to the conclusion that this kind of influence strategies (similar with coercive and expert influence strategies) were also not considered very popular among the respondents. When analysing the results of answers with respect to legitimate influence strategies we can observe an interesting fact that the relationships generally tend to be based more on written contracts than on informal agreements (over 85% of respondents answered that they do not use *informal agreements* or seldom use them). On the contrary, *long-term written contracts* were the most popular legitimate influence strategy (between 69 and 72% of respondents use them "often" and "very often").

The referent influence strategies are generally used quite often with a slight difference depending on the kind of partner (buyer or supplier). According to the results of the descriptive statistics referent influence strategies, over 60% of the given answers with respect to relationships with suppliers, and over 65% of the given answers with respect to relationships with buyers, belonged to the categories "often" and "very often". This kind of influence strategy was the third most often used, after informational and reward influence strategies. In relationships with suppliers these strategies are used more often (between 51 and 70% of respondents stated that they used them "often") than with buyers (between 41 and 63% of respondents stated that they used them "often"). However, two kinds of influence strategies from this group were less popular among the respondents. *Asking for compliance to requests not indicating any positive or negative outcome for their business* and *Asking to accept ideas without explaining the possible effect on your partners' business relationship* turned out to be quite seldom used (between 47 and 70% stated they used them "seldom").

Supplier-buyer relationships

Describing the results of the interviews with respect to problems with partners we noticed that for some reason the respondents tended to state that they had no or few problems with their partners. One may think that this is a painful issue to talk about. However, the fact remains that the frequency of the mentioned problems was quite low. There are two areas of business relationships which were called especially problematic (in comparison to other areas): *administrative and bureaucratic barriers* and *transport, logistics and infrastructure problems* (Appendix 10). Again the tendency is that these problems are more often found in relationships with suppliers than with buyers (almost half as much). The second problem seemed to definitely be the most painful subject for most of the respondents (19% of respondents have this problem with suppliers and 10% - with buyers). Concluding we must observe that buyers generally tend to be more organized and to create fewer problems for their partners.

According to the answers given by our respondents about the quality of their relationships we noticed that the majority of them are constantly looking for new partners (both suppliers and buyers). More than 80% of them agreed fully with this statement. Another interesting fact about relationships is that most of the respondents agreed that they have been working with the same partners for a long time (54% with suppliers and 49% with buyers). The respondents also show a great degree of dependence on their partners, since they could not substitute them so easily (69% with suppliers and 63% with buyers). With respect to the degree of dependence of partners on the respondents the situation was a little different. 25.8% of the companies answered that they fully disagree with the statement "Our partners could easily substitute us by another partner". That means that suppliers in

this relationship have less freedom to choose another partner and are more dependent on buyers than vice versa. It could be due to the number of available buyers offering acceptable conditions for business relationships.

This might be the reason why the respondents told us that they are constantly looking for new partners. One might assume that they try to decrease the degree of dependence on the already existing partners. Another explanation could be that the companies are not satisfied with their current partners (the following figure shows the case of relationships with suppliers answered by buyers).

Availability of resources

In order to see whether the possession of certain resources (financial resources, expertise, information, market position, image) could be the reason why some influence strategies are exercised, let us take a look at the availability of these resources in the interviewed companies (Appendix 11).

The decision about the choice of a certain influence strategies could be based on many factors including the likelihood of long lasting change; costs of influence strategies; desire for continued dependence; distrust of others; frustration, hostility and displacement of aggression; legitimacy and evaluation by third parties; self-esteem and need for power (Raven and Kruglanski, 1970.

However, two factors that are likely to be important in determining the use of influence strategies are the benefits a firm perceives it will gain and the costs it perceives will be incurred.

Financial resources (access to credits, other funds, etc.)

The comparison of the frequencies of answers with regard to the availability of financial resources shows that both suppliers and buyers have approximately similar distribution of resources. Over $^2/_3$ of suppliers and of buyers have high availability of financial resources. About $^2/_3$ of suppliers and of buyers have medium availability of financial resources. Only 1 respondent answered that suppliers have low availability of resources. We posit that the availability of financial resources could be used as a basis for using coercive and reward strategies.

If the availability of resources is generally low, no reward influence strategies could be exercised. The use of coercive strategies could be motivated by the low availability of financial resources.

Expertise (managerial skills, experienced personnel, know-how, etc.)

The comparison of the frequencies of answers with regard to the availability of expertise shows that more suppliers have high level of expertise (over 70%) than buyers (less than 1%). However, more buyers have medium level of expertise (over 70%) than suppliers (over 20%). In addition approx. 20% of buyers had low level of expertise.

Information (about consumer preferences, demand, etc.)

The results about the availability of informational resources are very similar to the results about the availability of expertise. More suppliers have a high level of expertise (over 70%) than buyers (less than 8%). However, more buyers have a medium level of expertise (over 70%) than suppliers (approx.18%).

Market position (access to market, market share, etc.)

The comparison of the frequencies of answers with regard to the market position shows that more buyers have a high level of these resources (over 60%) than buyers (less than 6%). However, more suppliers have a medium level of these resources (over 60%) than suppliers (approx. 25%). In addition approx. 28% of suppliers had low level of these resources.

Image (strong brands, good connections with partners, etc.)
The results about the availability of image are very similar with the results about market position. More buyers have a high level of image (over 80%) than buyers (approx. 10%). However, more suppliers have medium level of these resources (approx. 88%) than suppliers (approx. 10%). In addition approx. 2% of suppliers had low level of these resources.

Distribution of power
The quantitative measurement of the distribution of power in our survey confirmed the fact that power is unequally distributed in supplier-buyer relationships in Russian agri-food chains. Moreover we could also calculate the exact amount of power the companies had with respect to their suppliers as well as with respect to their buyers. The results of the calculations are presented in Figure 12.

Figure 12. Power distribution in supplier-buyer relationships in Russian agri-food chains
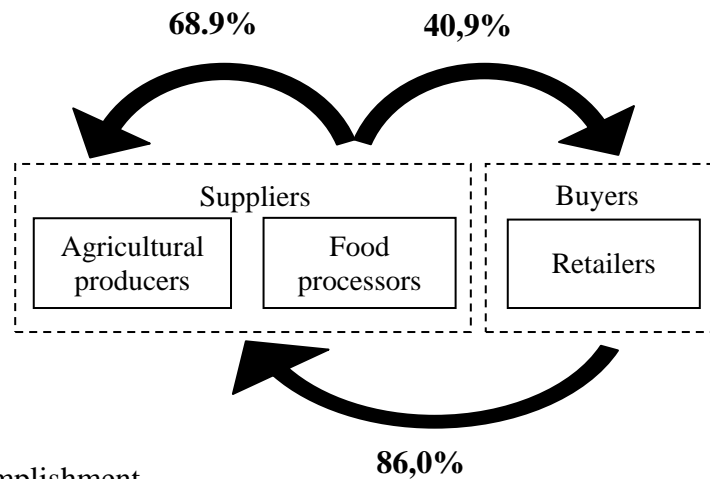
Source: own accomplishment

When food processors were asked about the possession of power with respect to their suppliers, they answered with respect to the raw materials and agricultural suppliers. When food processors were asked about the possession of power with respect to their buyers, they answered with respect to the retailers. When retailers were asked about the possession of power with respect to their suppliers, they answered with respect to food processors as well as whoever is the suppliers of the fresh produce, which does not need processing.
According to the answers given to the question "While coordinating the supply chain, to what extent do you influence your partners' intentions, actions or behaviour?" the average percentage of influence on suppliers (let's call it "power of buyers") accounted for 68.9% and influence on buyers ("power of suppliers") – only 40.9%. The average power of retailers over their suppliers turned out to be even higher – 86%.
When interpreting the results one needs to be careful, since the opinions of the interviewed experts could be very subjective. The respondents answered only according to their perception about how power is distributed in the supply chain. Therefore, we cannot claim that the obtained results account for the actual power distribution, since we did not conduct any real measurement. This is also the reason why the obtained numbers do not represent 100% in their sum. From the point of view of retailers, they possess 86% of power on average. It would mean that their suppliers should possess the remaining 14%. However, the opinion of food processors (who are the suppliers of retailers) is different. They claim that they possess not 14% (as we should assume), but 40.9% of power on average. If we

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rely on the truthfulness of this statement, we would have to assume that the power of retailers is not 86% (as stated by the retailers), but the remaining 59.1%.

6.2.3 Content Analysis and Interpretation of Results

The methodological basis of using qualitative content analysis, as well as the motivation to use it, has already been addressed in the previous chapter. We would like to add at this point that the second round of expert interviews with companies not only allowed us to grasp some quantitative aspects (which have been analyzed in the previous section), but also to retain some information beyond the standardized questions. Fortunately, the respondents felt inspired enough to tell more than what was asked in the questionnaire. As was done in the first round of the interviews, the opinions and expressions of the respondents were written down and kept for additional data analysis opportunities. The results of the qualitative content analysis are presented in Appendix 12 and described in more detail in the following section.

Supplier-buyer relationships in Russia
General characteristics
According to the conducted interviews it was generally agreed that Western companies represented by famous retail and food processing enterprises have brought changes in the Russian supply chain landscape after their entrance to the market. In fact they were said to "*have introduced new management approaches, new supply chain relationships*" (interviewee №34), to have created new conditions and versions of cooperation between the supplier and retailer as well as to have put new requirements to the organization of commercial work. The relationships between suppliers and buyers in Russian were characterised by a high degree of interdependence. Since the prospects of a survival and future prosperity of one party depend highly on the preparedness of another party to cooperate. Building a partnership therefore has a very strategic character, since "*both sides understand that they will need to work not only today, but also tomorrow and the day after tomorrow*" (interviewee №10). So there is a general understanding of both sides that just like the retailers cannot live without good suppliers, so suppliers cannot live well without buyers and retailers. Since the number of food manufacturers grows and the overabundance of supply offers and the available quantity of supermarket shelves sometimes do not correspond, the retailer faces the difficult task of choosing only those suppliers which can also offer well-marketable products. Retailers take care of effective filling of their trading areas and of their own parameters profitability. Otherwise retailers will suffer essential financial and reputation losses. Therefore, "*…the problem of the supplier is to show and convince the representative of the retail network that the offered version of cooperation will be favourable to both organizations*" (interviewee №94). Especially the aspiration to create partnerships with suppliers of strategically important materials or commodity groups was emphasized, since the supply of such products and materials may exert direct influence the position of the enterprise. As the interviewee №18 admitted "*…if these are complex products having a low degree of standardization, then the creation of partner relationships with suppliers is very important*". On the other hand relationships between suppliers and buyers in Russia underlie the same economic principles as in other countries, namely the nature and the rules of business. In this regard it was stated that manufacturers and retail commerce have opposite interests. The retailers try to keep the cost of a sourced product as low as possible, and suppliers and manufacturers are interested in acquiring the highest margin at sale and the maximum of

profit. Among advantages of work with retailers were mentioned the additional total profit received as a result of advancing growth of sales in comparison with growth of costs and favourable conditions from the point of view of volumes and stability of sales. Therefore, due to the different interests of both sides there was some tension in the supplier-buyer relationships from the very beginning. As stated by the interviewee №19, for suppliers "*there is a question to cooperate or to not cooperate with retail networks?*"

Problems with suppliers
The retailers undoubtedly also raise the same question with regard to suppliers, since some interviewees confessed that the work with some Russian suppliers was very insecure: "*One step to the left – you have earned some money, a step to the right and you are ruined*" (interviewee №13). Besides the problem of insecurity, an absence of trust was mentioned by interviewee №63, who stated: "*One of the main problems is also the catastrophically low level of trust. In Russia people have already been cheated so many times that they do not trust anyone under any conditions*". The main reasons for conflicts among retailers and suppliers was said to be default of contractual conditions (terms of delivery, terms of payment). Others named some basic problems characteristic for relationships with suppliers in Russia such as the lack of professionalism and reliability, absence of readiness to have long-term relationships and of problems with logistics. The following example, explained by the interviewee №51, shows that the ability to send professionally written trade offers, although considered one of the basic requirements for a supplier, could still be a problem in Russia: "*A supplier sends the offer to a network in such type, which you simply cannot imagine: text without a uniform blank and without paragraphs, half of text is emphasized with a computer since it is full of mistakes. Such suppliers will of course not be considered.*" Another example was given to us by the interviewee №23 as an illustration of some unreliable behaviour of suppliers: "*Their unique supplier in the category which had the goods and a possibility to deliver in this network informed in 3 days after the price arrangement has been reached that its prices have increased by 30 %. This network accepted it. There was nothing to do but to accept the new price. But the main thing is, that this supplier has raised the prices by additional 15 % in 2 days after the network has agreed on 30 %-increase. The majority of suppliers act similarly.*" This example shows that some suppliers use their advantageous status in order to profit from the price raises and do not care about the long-term relationships with their partners. The supplier has felt that the situation was in its favour and took the chance and raised the prices. However, we were also told that there is also a new group of suppliers in Russia who are ready to have long-term relationships and that such suppliers are willing to learn from their more competent Western partners and "*ask the more knowledgeable partners about what to do exactly*" (interviewee №38). More and more suppliers are beginning to understand that networks will continue grow and that working with networks is useful and strategically important for a long-term stability. As stated by the interviewee №53, "*…we are not on different sides of barricades, but on one side*" or by the interviewee №65 "*…today there are also companies-suppliers which work with networks simply for the sake of maintenance of relationships*" (interviewee №38).

Problems with retailers
Generally we get the impression that suppliers in Russia are rather more dissatisfied with their status than buyers or retailers. Our interviewees complained about unfair policy of retailers with respect to suppliers, toughening of conditions and discrimination at the conclusion of delivery contracts, an indispensability to pay "entrance tickets", to render networks additional services without which the latter refuse to expose the goods on

shelves. In fact, we were told that suppliers "*...work almost "at a zero" despite of good profitability of production and serious turnovers*" (interviewee №19) and "*suffer from retailers which take the delivered products and do not pay back for a long time*" (interviewee №63). Also the fact was mentioned that retail networks "*reduce prices literally to the bottom threshold of profitability*" of suppliers (interviewee №14), "*press on suppliers using a monopoly position in the market*" (interviewee №18) and assign to suppliers additional obligations and works related with additional expenses for suppliers such as entrance fees. Apparently retailers also seem to differentiate suppliers according to their status. It was mentioned that the size and the image of the supplier played an important role and made the retailers treat it differently than small suppliers, since "*the giant manufacturers investing into promotion of brands billions of rubles may sometimes pay nothing to the retailers for accommodation of their goods*" (interviewee №19). Generally it was noted that each retailer was using individual approaches or practices with suppliers: "*…some suppliers may count on discounts, others may not*" (interviewee №62).

Our picture of retailers drawn by some interviewees did in fact correspond to the complaints made by suppliers. Gradually strengthening positions of retail operators in a chain of consumer goods tend to increase requirements for suppliers of manufactured goods. In connection with constant progress of these requirements and toughening of quality standards of production, retailers tend to exert more rigid control over the suppliers and the quality of the delivered goods. Some interviewees expressed the opinion that in observing the behaviour of the trading networks of Petersburg in relation to Petersburg manufacturers "*you can say that ...networks show rigid uniform style in work with suppliers*" (interviewee №12). The observers of the Moscow market confessed that in their work with large traditional Russian suppliers of some basic food stuffs like bread, dairy and sausage products retailers put an amplifying pressure upon suppliers and that "*the latter are compelled to agree to partially acceptable conditions*" (interviewee №96). Others even described the relationships between suppliers and buyers using the word "*dictatorship*" (interviewee №14 and №59).

However it was also stated that some retailers begin to be more aware of the fact that good suppliers are indeed a precious treasure and should be treated accordingly. Therefore, "*retailers start to reconsider and reconstruct a pool of the suppliers; they look for the most reliable partners, loyal to a network, those suppliers on whom it is possible to rely*" (interviewee №87). It is also necessary to mention that the state has already noticed that some retailers require too many conditions from their suppliers and have issued some laws in which they prohibit or limit the direct exploitation of suppliers. Now the government and the state administration tracks that networks treat suppliers correctly. As a result, retailers have been forced to soften their terms of trade. Most of them have cancelled entrance bonuses, but as compensation to that they have added new rigid conditions for suppliers concerning discounts and delays of payments. The following example told to us by interviewee №47 explains this situation: "*Many networks have started to cancel entrance bonuses. I consider, that it is connected, first of all, with credits of the state and the trade laws concerning networks. The first has cancelled entrance bonuses X5 and, notice, this network has received among the first the big state credit. It is clear, what "cancelled" Means*. As stated by the interviewee №48, "*…no entrance bonuses are necessary to networks, since they have free money of suppliers on 90 - 120 days and, the additional discount besides*".

Power in Russian supply chain and networks
Existence of power
According to the results of our interviews we were able to identify the main fact that the existence of power in supply chain relationships indeed was confirmed. For example, interviewee №8 stated that "*for the last years some networks have turned out to be not only very powerful, but become the aggressive players which alter rules of work on the market under own discretion*".

Distribution of power
We were even told that the counterbalance of power is by all means on the side of buyers. Qualitative statements also clearly indicated that the power disparity was in favour of buyers. As stated by the interviewee №70 "…*this parity is frequently not in favour of suppliers*". In fact we could even determine several reasons for the existence of such counterbalance. The most frequently given reason was the number of trading partners: "*Since there are more suppliers than processors and retailers, suppliers have less power.*" (interviewee №75). The position of the seller was initially stated to be stronger than a position of the supplier, since "*there are many more candidates for one meter of a shelf, than it can physically contain*" (interviewee №17). Among other reasons which were said to be responsible for the larger portion of power among the supply chain participants were market share, size of area in the commodity market as well as the status of the trading partner. As for the market share, we learned that it was not the only factor necessary for the formation of power: "*market share is not the sufficient condition of domination…*" (interviewee №35). Such factors as the company name and image turned out to be not less important as other factors mentioned. As stated by the interviewee №88 „*when it is a preferred supplier he has more power than a small and unknown supplier*".

Existence and use of influence strategies for supply chain management
Coercive influence strategies
As far as coercive influence strategies are concerned, we were able to receive quite a number of statements about both their existence and use within the context of Russian agri-food supply chains. For example, one of the methods of coercive influence strategies were said to be the entrance fee or "entrance ticket". We were told that the general "entrance sum" was influenced by some parameters such as "…*popularity of the manufacturer and volume of its advertising budget*" (interviewee №50) or "*commodity group represented (it is known that to place ketchup in a network is cheaper, than beer)*" (interviewee №62). Though the fact that suppliers are required to pay fees in order to be able to work with some big retailers is evidently negative for suppliers, retailers regard this method in a positive light and justify its use due to the fact that "*the fees paid by suppliers would be possible to recognize as the mechanism of competitive selection of the best manufacturers*" (interviewee №69). Besides, the positive view on the use of coercive means of management was further supported by the fact that "*it is economically inexpedient to use partner relationships with all suppliers*" (interviewee №84). This interviewee explained to us that as far as the principles of work on commodity groups of non-strategic character are concerned, it would be appropriate to use coercive methods: "*In this case it is not necessary to be afraid that opportunistic attitudes with the supplier will negatively affect quality of a product*". This fact was also confirmed by the interviewee №24, who stated that "*If we are speaking of the suppliers of simple products with a high degree of standardization, it could make sense to apply hard methods.*" On the other hand, some participants of our survey expressed the opinion that coercive methods should be used with caution, since e.g., "*such mechanisms as threats and penalties are not very effective*

because they show that the company is aggressive" (interviewee №7). In general, we could see that coercive methods were seen both in a negative and positive light, depending on the object and purpose of use. Especially one of the statements clearly explained this point: "*such approach in short-term prospect can yield positive results, but in long-term is not always effective*" (interviewee №5).

Reward influence strategies
The mechanisms of reward influence strategies were not left without remarks by our interviewees. For example, the assistance programmes offered by dairies to their suppliers were stated to be important in fostering the high quality standards to guarantee long-shelf-life dairy products. Interviewee №6 especially highlighted the advantages of using assistance programs in the long-term: "*Certainly, it requires additional expenses of time and forces, but at the same time allows reducing expenses and to raise a degree of adaptation of the enterprise to changing market conditions not only in short-term, but also over the longer term*".
The attractiveness of reward mechanisms such as favourable payment conditions was explained on a specific case by the interviewee №22, stating that a supplier-company even used it as choosing criteria for working with retailers: "*The company has simply terminated contracts with all networks this year and does not work with anybody except for Auchan because it pays without delays*". The interviewee №81 also indicated that besides conditions of payment, other mechanisms of reward influence strategies such as "*the granting of the greatest possible level of discounts*" were also considered to be very attractive for suppliers.

Expert influence strategies
The evidence on the existence of expert influence strategies which is undoubtedly based on the expertise and professionalism of supply chains partners was stated by many interviewees. In fact, it is quite obvious that some big foreign retailers and manufacturers indeed possess more expertise on SCM approaches and have quite some experience with using such approaches in other countries before. As the interviewee №7 stated "*Western companies have brought not only new management approaches to Russia but also innovative products such as drinking yoghurts and curd (partly curd – partly yoghurt)*".
The fact that such Western companies do possess this specific expertise is readily recognized by some Russian suppliers, which confess their own lack of experience and try to learn from their partners by "*asking the more knowledgeable partners about what to do exactly*" (interviewee №35). We learned from our interviewees even further that suppliers evidently enter supply chain networks "*having only minimal, and is frequent also simply zero information on work of commercial structures of the potential customer*" (interviewee №29).

Informational influence strategies
The use of informational influence strategies and their positive side was even more praised and acknowledged by our interviewees than the expert one. In fact, the importance of collecting information about partners and creating specific databases was mentioned: "*the creation of a database of the list of potential suppliers which allows obtaining information quickly about suppliers with desirable characteristics is of fundamental importance*" (interviewee №26). It was also stated that due to the favourable position of retailers in the chain and their closeness to the consumer they also end up possessing more information and as a consequence a bigger ability to use informational influence strategies. Interviewee №20 underlined this point: "*By tradition manufacturers had the greatest market*

information concerning their products. Now it is not so. As retail commerce has cash department, and by means of a bar code of a product, can collect the information on the sold goods and on preferences of clients. The information is the powerful weapon in hands of trading chains..." The fact that the possessed information could be very effectively used to gain the favour or interest of suppliers was quite obvious as well. The interviewee №60 stated that "*supplier maybe also interested in reception of trustworthy information how those or other types of the goods are getting sold*".

Legitimate influence strategies

According to the statements of our interviewees, the legitimate influence strategies were claimed to be the precondition harmonious relationships with suppliers. For example, interviewee №27 reported: "*There is a contract with suppliers which defines the rights and duties of each side and also timeframes of payments. Both sides signed, confirming that the conditions of the contract suit everyone. Therefore there is no room for conflicts.*" The effective use of legitimate influence strategies was further confirmed by some other participants of our survey. We learned that it was connected with the organisation of the system of justice in Russia and its perception by other partners. Interviewee №83 expressed the opinion that especially threats on the legal basis are very effective. "*The system of justice in Russia works in such a way that the judges are not allowed to acquit more than 1% of all cases. Therefore, the chance that the legal proceedings will result in an indictment is quite high*" (interviewee №83).

Referent influence strategies

It is interesting to remark that some interviewees confessed that they do observe the clear existence and use of referent influence strategies. For example, interviewee №2 clearly stated that "*it is difficult to say who influences whom to what extent, because there are different sources of influence. For example, our company has a strong image and it gives us the basis for our influence.*" Others only saw it indirectly or even call this phenomenon "*paradox*": "*sometimes there is such a paradox that the company wishes to enter our network at any cost*" (interviewee №87). In general, all the factors making the company so attractive to other partners though a solid reputation and established sales volumes do contribute to the company's ability to use referent influence strategies. Interviewee №66 stated that "*among advantages of work with networks of the company mark the additional total profit received as a result of advancing growth of sales volumes in comparison with growth of costs*". Still others admitted that they observed in the behaviour of suppliers working with big retailers, because they seem to feel like they are "*on the safe side*" (interviewee №24).

6.2.4 Discussion

Before conducting the expert interviews we defined some questions about supply chains and networks and their management in the Russian agri-food business, which we would like to answer now that we have got the results of the survey. Among the questions we raised were:
- Are there any problems in relationships among Western (foreign food processors, retailers) and local partners (suppliers, food processors, retailers)?
- Are there any difficulties in managing supplier-buyer relationships with regard to coordination and cooperation?

- Can the concept of SCM be seen through the lens of cooperation (alignment of interests) and coordination (alignment of actions)?
- If yes, do the problems of cooperation (alignment of interests) differ from the problems of coordination (alignment of actions)?

The results of the qualitative analysis of the interviews show that the retailers and their suppliers still have some tensions and problems in their relationships. Since the number of available suppliers is big, the focal companies have the difficult task of choosing the reliable suppliers offering well marketable products. Suppliers, in turn, feel the dictatorship of retailers by having to pay high entrance fees and sell their goods at lower prices. No wonder that some suppliers of strategic materials of goods try to use any chance to increase the price whenever they feel that the retailer is more dependent on them and cannot change the partner right away. However, the behaviour of some Russian suppliers was described as a "no-go". We were told that suppliers have a low level of professionalism, do not trust anyone and try to take advantage of any situation as soon as there is a chance. Some suppliers do not consider the importance of investing into the long-term relationships and being a fair business partner. However, we were also told that nowadays there is a new layer of suppliers, which show more understanding towards the strategic character of relationships. Therefore, suppliers and buyers have some problems which are very characteristic for a transition economy like Russia. Russian suppliers have inherited their management style and the mentality influenced by the soviet planned economy. Foreign investors help to shape their mentality and the way of conducting business by introducing new managerial concepts and teaching the suppliers.

Except for problem in relationship we also learned about the existence and distribution of power from our survey. Before conducting the expert interviews we defined some questions about the role of power in the Russian agri-food business:
- Does any power exist in supplier-buyer relationships at all in Russia?
- If yes, how is power distributed among supply chain actors and why?
- Which supply chain actors possess more power than the others?
- What are the sources of this equal/unequal power distribution?
- Can power or its sources be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974)?

The existence of power was confirmed by the findings. Moreover, we were told that retailers were more powerful than suppliers, and that they behaved aggressively. The reason for the power of retailers was the bigger number of suppliers and the limited shelf space for the abundance of goods offered by suppliers. Therefore, the research assumption was confirmed and was similar to the research finding of the first round of the interviews. But this time we had no information on whether the power could be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974). Maybe it was due to the fact that the focus of the expert interviews was more on obtaining the quantitative results.

We also gained a lot of valuable information with regard to the use and role of influence strategies for SCM in the Russian agri-food business. The previously formulated research questions about this topic were:
- Are influence strategies used for managing SCM?
- If yes, can they be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974)?
- What influence strategies are used more often and which ones are less often or not used at all and why?
- What is the perceived effect of using certain influence strategies for SCM?

With regard to the influence strategies, we obtained a clear evidence that they are indeed used and could be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974). In particular, managers should be aware of the fact that influence strategies may have different effects on coordination and cooperation depending on its source. Influence strategies are not necessarily negative. Depending on their origin, they may have different effects on cooperation and coordination. Influence strategies can destroy a cooperative relationship or help solve problems of coordination and aligning actions. The knowledge about these effects should be skillfully used for effective management of supply chain networks. The question about the perceived effect of using certain influence strategies for SCM is further dealt with in the quantitative part of the study, which is presented in the next chapter.

The analysis of the availability of resources among suppliers shows that they have a high level of three kinds of resources: financial resources, expert knowledge and information. Buyers in their turn had a high level of financial resources, market position and image. One could assume that through cooperation both sides could benefit from each other, since they would complete the missing high level of the resources of the other partner. Generally the descriptive analysis shows that suppliers used the informational influence strategies very often, whereas the use of expert strategies was moderate. This could be explained by the fact that either the suppliers were not completely aware of the effects of expert influence strategies or they were aware of them, but they perceived the use of expert influence strategies would cause more costs than expected benefits. Suppliers also used reward influence strategies more often than the other influence strategies. It could also be explained by the fact that the availability of financial resources was very high. Coercive, legitimate and referent influence strategies were relatively seldom used or at least not so often as reward and informational influence strategies. Buyers also used preferably reward and informational influence strategies more often than other influence strategies. In addition, the use of referent influence strategies was more frequent than in case of suppliers. This could be explained by the fact that buyers possessed a high level of image and reputation. Other influence strategies were not so often or moderately used.

As the analysis shows, the use of the influence strategies could be connected with the availability of resources. But the availability alone was not the only the factor for choosing the certain influence strategy. Another reason, as mentioned before, could be the costliness of the chosen strategies in comparison with the expected effects or benefits. According to the classification of Wilkinson (1996), influence strategies include direct and indirect costs. Direct costs involve the costs of communicating and also the costs of keeping informed of the subject's behaviour. Indirect costs include opportunity costs – the use of influence strategies in one direction may well preclude their use in another. In fact, if we are to be more specific on the nature of costs incurred through the use of influence strategies, we need to take into account other types of costs. They can include monetary (e.g., administrative costs, negotiation costs (costs of communicating the requirements), implementation costs (giving rewards, investing in training), surveillance costs (costs of keeping informed of the subject's behaviour)) and non-monetary costs (e.g., loss of reputation and credibility, bad image, battle of interests, negative effects on the relationship, suspicion, dislike or unwillingness to comply in the future). Benefits could also be classified into monetary (e.g., receiving resources from punishing) and non-monetary benefits (e.g., gaining a positive image by offering information, advice, recommendation), short-term and long-term benefits (e.g., benefits from investing in training and consulting services, future positive effects on the relationship).

Hunt and Nevin (1974) implicitly recognized this cost versus benefit trade-off in withholding assistance as a form of influence. We think that the costs of coercive influence

strategies outweigh the gains from cooperation. Benefits of coercive influence strategies tend however to be short-term. It is generally believed that punishment does not kill the motive and only suppresses the response. So if the punishment is removed, the behavior will probably reoccur. Therefore, administering coercive influence strategies always bears a risk of reprisals from punished actors. Applying coercive influence without an explanation or warning might have destructive effects on the long term relationship, since punishing reduces the economic resources of the target, and thus reduces the motivation to further participate in the exchange. In some cases less aggressive influence strategies might be an effective way to reach compliance on a certain issue.

Legitimate, referent, expert, informational, and reward influence strategies known for their 'soft' nature can be used to achieve cooperation among the participating supply chain actors. Some of the non-coercive influence strategies can also be used to solve the problems of coordination. The use of reward influence strategies promotes a cooperative relationship, which eliminates the problem of aligning the interests of individual actors of the supply chain. Retailers use reward influence strategies by using discounts for a bigger amount of sold goods. Reward influence strategies are effective because they can be targeted to a specific actor and to a specific behaviour or performance. We posit that rewards, even though they are costly, will have a longer lasting effect on the relationship. In general, the more valuable the reward, the longer lasting effect it will have. In general both coercive and reward influence strategies are seen to be able to enhance predictability of actions of other supply chain members, since the existence of hierarchal elements and authority makes everyone in the network know what will happen if the rules are not observed or observed. The target of influence will either get a reward for appropriate or outstanding behaviour, or be punished or their rewards will be withdrawn.

Expert influence strategies are usually short to medium-term oriented and involve low costs. Being an expert already presupposes that the expert is in possession of some kind of expertise, which he can easily apply by giving an expert advice. The effect of the advice is short-term because expertise can be a particularly non-durable influence strategy. Once the expert advice is given, it has little or no value for the consequent transactions. Consultations are more costly, since they may require setting up additional services or teams of workers who would be spending their time consulting and helping with the implementation of the projects. However, the benefits of consultations are also higher than giving an expert advice, because the expert has an insight into the matters of the target and can use the results of the joint work in the future. Training involves the highest degree of investments, but also would probably bring the long-term benefits.

Setting up information exchange might require some logistic costs as well as IT-investments. Suppliers involved in retail relationships with greater levels of participative decision making and joint goal setting are more likely to be committed than those in relationships characterized by lesser participation and joint planning. Participation refers to the joint expectation that both parties will share information and make joint decisions. Therefore, informational influence strategies provide more understanding on the needs and problems of the target which can be used in the future.

Legitimate influence strategies might stem from a strong market position (characterized by a high market share and/or effective entry barriers for new competitors), which can be skillfully used to achieve cooperation and coordination goals. Legitimate influence strategies offer safeguards to a company's specific investments, because one has to take into account the legal and economic consequences of violating explicit written contracts or rules. After all, the costs of making a legal contract are quite low. However, the effectiveness of the rules and obligations stated in the contract are long lasting for both parties. Therefore, legitimate influence strategies generally have a long-term orientation.

The costs of using referent influence strategies are not very high. The benefits of using referent influence strategies are, however, moderate, since they do not explicitly indicate that the task should be done, but have a suggestive character. Therefore, referent influence strategies do not have a medium-term orientation. The findings regarding the research assumptions are shown in Table 6.

Table 6. Findings from Telephone Survey B regarding the research assumptions

Research assumptions	Fully confirmed	No information
A1: Problems in relationships among Western and local partners exist.	x	
A2: Problems of managing supplier-buyer relationships can be grouped into problems of cooperation (alignment of interests) and coordination (alignment of actions).	x	
A3: Power exists in supply chains and networks.	x	
A4: Power is asymmetrically distributed among actors in supply chains and networks.	x	
A5: The closer the supply chain actor is towards the consumer along the supply chain, the more power he possesses (retailers are the most powerful, etc.).	x	
A6: Power can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974).		x
A7: Influence strategies are used by focal companies for supply chain management.	x	
A8: Influence strategies can be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) /Hunt and Nevin (1974).	x	

Source: own accomplishment

Therefore, we posit that expected costs and benefits are the most important factors determining the choice of influence strategies for achievement of a specific goal. If the costs and benefits involved are known, then the best behaviour would be to use influence strategies in such a way that there is the maximum net gain, i.e. benefits minus costs. In this respect, the companies should weigh the expected costs and benefits before using influence strategies. If the companies choose to go through with the influence attempt, they will weigh the most appropriate influence strategy. Realistic expectations of costs and benefits will help ensure that the right influence strategies are applied.

We also think that in order to manage supply chain networks successfully the knowledge of different influence strategies is essential. The examples of such differentiation could also be found in the Russian food retail landscape. If a retailer gets a supplier to do what the supplier would not otherwise have done, the retailer probably has the means to possibly threaten the supplier or make him act in a way which is favourable for retailer. If both actors have an unequal opportunity to achieve their goals and pursue their interests, the retailer has a greater capacity to achieve his goals than supplier has. The summary of findings of the conducted expert interviews can be found in Appendix 12[10].

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[10] For more detailed research findings of Telephone Survey B please refer to Belaya and Hanf (2011d).

6.3 Summary of Chapter 6

In order to answer our research questions and to validate the research assumptions defined in *Chapter 4* we conducted two telephone surveys (A and B). We found out that problems in relationships among Western and local partners really exist and can be grouped into problems of cooperation (alignment of interests) and coordination (alignment of actions). Moreover, the existence of power and its asymmetrical distribution along the supply chain was confirmed. We also received some hints about the possible power advantage of retailers in the Russian agri-food business. Also, we learned that influence strategies could indeed be classified according to the framework of French and Raven (1959)/Raven and Kruglanski (1970)/Hunt and Nevin (1974) and that the frequency of their use varies depending on the kind of influence strategies.

Coercive influence strategies turned out to be the least often kind of influence strategies used. We recognized that reward influence strategies were the second most widely used kind of influence strategies (after informational influence strategies). Entrance fees and assistance programmes offered to suppliers were named as examples of coercive and reward influence strategies. We also found out that big foreign retailers and manufacturers were indeed seen to possess the ability to apply expert influence strategies due to their expertise and experience in using new management approaches. Informational influence strategies were stated to be the most often used and the most popular kind of influence strategies among the respondents. As for legitimate influence strategies, formal legal agreements and obligations were preferred over informal ones. Referent influence strategies were stated to be the third most often used kind after informational and reward influence strategies. In general, according to the findings of the content analyses, we were able to confirm our research assumptions.

7. Empirical Study of Russian Agri-food Business (Part II: Partial Least Squares (PLS) Path Modeling)

In *Chapter 7* we present the empirical part II of the thesis which consists of the findings of Telephone Survey B conducted not only for the purpose of testing research assumptions about the existence and use of influence strategies but also for the purpose of testing the research hypotheses about the effects of influence strategies on cooperation and coordination also developed in *Chapter 4*. As mentioned in *Chapter 6* Telephone Survey B was conducted from the 31st of March till the 17th of June 2010 and included 97 semi-structured in-depth interviews about supplier-buyer relationships of international food retail and processing companies operating in the area of food processing and food retailing in Russia with at least 10% of foreign direct investment capital. In the part of *Chapter 7* we describe the method of Partial Least Squares (PLS) path modeling which was chosen for conducting the model assessment of our data. Our decision to use the PLS was based on the fact that, in contrast to other Structural Equation Modeling (SEM) techniques, the PLS avoids small sample size problems and can be used to estimate very complex models with many latent and manifest variables. The SmartPLS software 2.0.1 (Ringle et al., 2005) was used for model testing. Since the data contained two sets (answers of experts with respect to their relationships with suppliers and with buyers), we were able to run our model two times and received two different models for verification of our research hypotheses. After model assessment we present the interpretation of results followed by intensive discussion.

7.1 Methodological Issues of Partial Least Squares (PLS) Path Modeling
7.1.1. The basic idea of Partial Least Squares (PLS) Path Modeling

Partial Least Squares (PLS) path modeling represents one of the techniques of Structural Equation Modeling (SEM). PLS has been enjoying increased popularity in many different scientific disciplines and areas of research recently. SEM represents a statistical methodology which allows the causal relationships among several complex constructs composed of a number of separate indicators to be investigated. Such complex constructs are called latent variables (LV) and are usually measured by indicators called manifest variables (MV). SEM generally combines the two approaches of the path analysis and the Confirmatory Factor Analysis (CFA). Besides PLS there are a number of other techniques such as LISREL, AMOS, Mplus and EQS used in SEM which all differ to some degree depending on the sample, research aim and other criteria.

The idea of PLS was developed by Herman Wold as an econometric technique for statistical data analysis in his paper Wold (1966). The finalized PLS approach to path models was published in Wold (1979) and further described and developed in Wold (1982, 1985). This new technique was designed for working with complex models and small sample sizes as compared to the number of variables and represents a modeling technique linking a block of response variables with a block of explanatory variables. PLS generally combines the features of Principal Component Analysis (PCA) and Multiple Regression (MR) and represents a second-generation multivariate statistical method (Fornell and Bookstein, 1982) for analysing indirectly measured causes and effects of different concepts in complex behavioural systems. Since PLS Path Modeling is used to explain the residual variance of the latent and manifest variables in any regression run in the model (Fornell and Bookstain, 1982), it is seen to be more an explorative than a confirmative approach unlike LISREL or other techniques of SEM.

The main idea of the PLS is an iterative algorithm of conducting the path analysis of the relationships among the theoretical constructs (structural or inner model) and factor analysis for measuring the latent constructs (measurement or outer model). PLS path models are formally defined by two sets of linear equations: the structural model and the measurement model (Figure 13).

Figure 13. Example of PLS Path Model
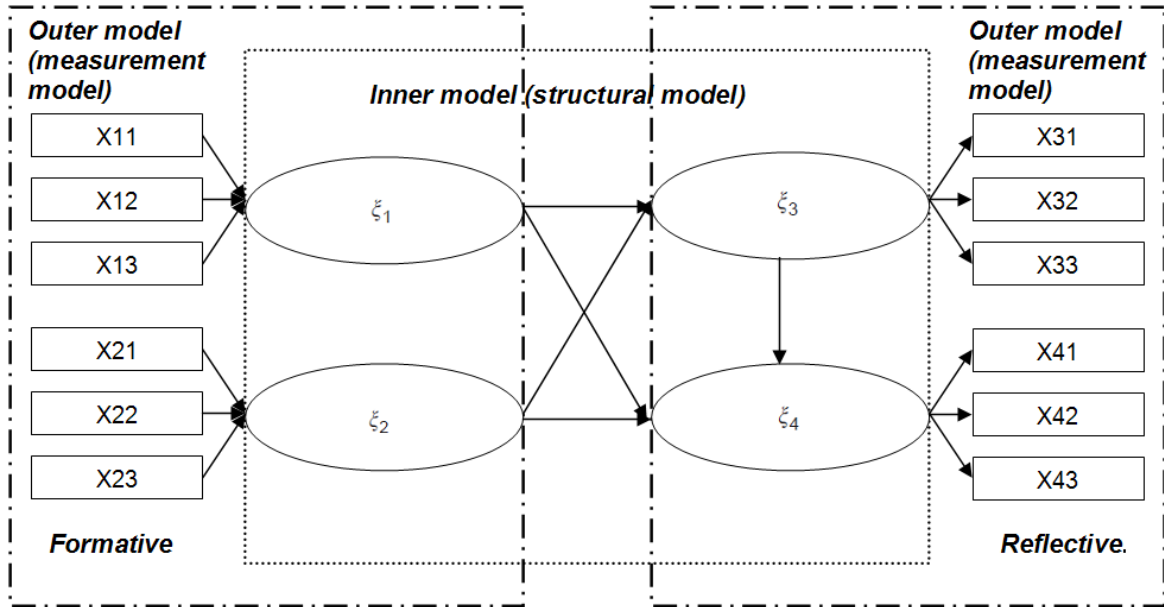
Sorce: Adapted from Henseler et. al. (2009)

The inner (structural) model estimates the relationships among unobserved or latent variables whereas the outer (measurement) model specifies the relationships between latent variables and their manifest variables. Latent variables represent theoretical constructs or phenomena which are not directly observable, therefore they are measured or assessed by means of multiple observable manifest variables. The structural model for relationships between latent variables can be specified as follows (Henseler et al., 2009):

$$\xi = B\xi + \zeta \qquad (1)$$

where ξ is the vector of latent variables, B denotes the matrix of coefficients of their relationships, and ζ represents the structural model residuals. The basic PLS design assumes a recursive structural model that is subject to predictor specification. Thus, the structural model constitutes a causal chain system (i.e. with uncorrelated residuals and without correlations between the residual term of a certain endogenous latent variable and its explanatory latent variables). Predictor specification reduces Equation (1) to:

$$(\xi \mid \xi) = B\xi \qquad (2)$$

In the structural model the relations between the constructs are connected by means of the path diagram. The direction of graphical arrows shows the causal relationships representing the assumed hypothesis. There is a possibility for several arrows to point from one construct (exogenous variable) to several others (endogenous variables), indicating multiple effects of one latent variable on the other ones. The path coefficient shows the strength of the effect ranging from -1 to 1. The negative sign indicates the opposite correlation. If the value of the path coefficient equals 0, it means that the exogenous variable has no influence on the respective endogenous variable (Jahn 2007).

The outer (measurement) model represents the measurement of unobservable (latent) variables through a number of observable (manifest) indicators. One of the fundamental principles of PLS Path Modeling is the assumption that all information between observables is contained in latent variables Hereby the variables of one outer block are assumed to be uncorrelated with the variables of other outer blocks. In this context, the measurement model contains relationships between a latent construct and its measures (items or indicators), while the structural model contains the information about the relationships among different latent constructs (Scholderer and Balderjahn, 2006).

PLS Path Modeling is able to simultaneously model the structural (relationships among latent variables) and the measurement paths (relationships between a latent variable and its manifest variables). PLS algorithm allows each indicator to vary in as much it contributes to the composite score of the latent variable. Manifest variables are able to link to only one latent variable, whereas a latent variable can have several connections among other latent constructs. The direction of pathways and arrows in the measurement model and the causality between the latent variables and its indicators can either be described by a reflective or a formative mode (Albers and Hildebrandt 2006; Jarvis, MacKenzie and Podsakoff 2003).

As mentioned, SEM offers several methods of analysis. One of the methods which is generally more known in the scientific literature is the co-variance analysis which is done using LISREL. Another less known, but getting more popular, method is the variance analysis which is done by using PLS. Some researchers claim that both methods seem to compete against each other (Scholderer and Balderjahn, 2006). However, this statement might not be really true, since both methods have abilities to reach somewhat different research aims and could be used to answer different research questions. In this section we try to provide a list of distinctive features of both of these methods pointing out why choosing PLS rather than the classical covariance-based approach LISREL could be considered so important. While both of these methods do have some similarities, they still possess a number of qualifications which make them both very useful SEM techniques. Therefore, one must study these qualifications carefully before choosing one of them.

Numerous researchers have addressed the advantages of PLS (Jöreskog and Wold, 1982; Fornell and Bookstein, 1982; Dijkstra, 1983; Lohmöller 1989; Falk and Miller, 1992). One of the advantages of PLS is its ability to handle huge amounts of data in a situation when there is limited theoretical knowledge. Very complex models with multiple latent variables and indicators can be estimated and analyzed with PLS because the algorithm treats the model step by step and does not face the model complexity as a whole in one single step. PLS is seen as a useful and flexible tool for model building (Sellin, 1995), and as able to solve this problem. Besides, PLS has minimal demands on measurement scales, sample size, and residual distributions (Chin, 1998). The PLS path modeling is more robust and it can be used even in cases when measurement models are falsely specified (Jarvis et al., 2003). PLS is considered to have a better ability for estimating complex relationships (Fornell et. al., 1990; Fornell and Bookstein, 1982). Wold (1985) represents the opinion that there is no other better suited method that PLS when dealing with in large, complex models with latent variables.

It is also simple to use for both formative and reflective indicators and can be used to estimate latent constructs with only one manifest indicator (Hair et al., 2006). PLS begins by calculating case values and estimates latent variables as exact linear combinations of their indicators (Fornell and Bookstein, 1982). In addition, despite the fact that PLS is generally considered to be prediction oriented, it can also be used for theory confirmation, since it can predict a set of dependent variables from a large set of independent variables (i.e., predictors).

Another advantage of PLS is its ability to deal with small samples. Although there is no unanimous agreement as to what a 'small' sample size really means, PLS is generally applicable in situations when the sample size is very small. There is a strong rule of thumb which allows the sample size be equal to: (1) ten times the scale with the largest number of formative indicators, or (2) ten times the largest number of structural paths directed at a particular construct in the structural model (Chin, 1997). There is also the weak rule of thumb which suggests using a multiplier of five instead of ten for the described requirements (Tabachnik and Fidell, 1989). Chin and Newsted (1999) used PLS for estimating a model with a sample size of 50. Others report on even lower numbers of observations possible (27 variables using two latent constructs with a data set consisting of ten cases) (Chin et al., 2003). Generally one should be cautious with smaller sample sizes, since they begin to lose their explanatory power and may represent problematic solutions (Nasser and Wisenbaker, 2003). However, this discussion should be continued in each individual case in order to able to reason about the appropriate technique for a certain sample size.

The PLS path modeling also has some disadvantages. PLS is sometimes called 'soft modeling' in comparison to other 'hard modeling' techniques of SEM such as LISREL. The reason for this name is the fact that PLS uses fewer or no distributional assumptions and no assumptions of the structure of the residual covariance (Vinzi et al. 2010), while model estimation by means of LISREL is based on the assumption of a multivariate normal distribution of the observed variables (maximum likelihood).

In situations when the theory is strong and needs to be tested, LISREL would be more appropriate than PLS, since a confirmative analysis would be more at place. PLS is more intended for causal-predictive analysis in situations of low theoretical background and a high degree of complexity. In contrast with LISREL, PLS is recommended at an earlier stage of research and theoretical development in order to be able to test theoretical models of exploratory character (Henseler et al. 2009).

Many researchers praise the PLS path modeling because of its ability to deal with formative indicators (Chin, 1998), however there is some evidence, that LISREL can also perform this task (Jarvis, et. al, 2003). The only argument against LISREL is that PLS can better cope with multicollinearity (Gustafsson and Johnson, 2004). The fact remains that LISREL is just as good at formative models as PLS. The fact that PLS is the only method able to estimate formative constructs is simply not true.

A further difficulty is the interpretation of the loadings of the latent variables, since they are based on cross-product relations with the response variables. In addition, since the case values for the latent variables in PLS are composed of manifest variables that may contain measurement error, they must be considered as inconsistent (Fornell and Cha, 1994).

Another problem is that many users of SmartPLS and PLS-Graph often do not understand the algorithm which is behind the graphical symbols of the model (Hair et al., 2006). Such facts as minor demands of the measurement scale and the number of the observations and the so-called soft distributional assumptions are often ignored or not treated with due understanding. Therefore, one should be aware of the consequences of possible misuse of PLS due to its simple application in graphical-interface programs.

PLS is also called a 'limited-information method,' while LISREL is viewed as a 'full information method' (Steenkamp and van Trijp, 1996). This is due to the fact that PLS parameter estimates are not equally efficient. Estimations of loadings and structural coefficients in the PLS are often biased and viewed critically by many researchers, since they are said to be overestimated and underestimated, respectively. PLS is said to underestimate the correlations between the latent variables and overestimate the loadings (i.e., the parameters of the measurement model in all real-life situations, in which the

sample size and the number of indicators per latent variable is limited (Dijkstra, 1983). Those researchers who oppose small sizes for covariance-based SEM techniques especially like this criticism of component-based PLS, since it shows the low reliability of the research results obtained through such method. Besides, the possibility of imposing value or equality constraints on path coefficients does not exist in PLS unlike in other covariance-based SEM.

In the literature a lot of critical opinions could be found about the use of PLS Path Modeling and the applicability of its results. However, generally the growing body of literature emphasizing the advantages of PLS is obviously much more significant, which leads us to the conclusion that PLS is much more widely accepted by researchers than initially hoped and that the number of those opposing this method remains reasonable. Besides, one must admit that direct comparisons of PLS vs. LISREL or AMOS are very difficult to conduct, since the nature of each technique requires slightly different research objectives and changes the results accordingly. We chose some of the most important arguments appraising and critically discussing the PLS Path Modeling.

The advantages of PLS have encouraged its application more recently in agri-food business (Storer et al., 2004; Dautzenberg, 2005; Schulze et al., 2006; Lu et al., 2008; Gyau and Spiller, 2009; Gagalyuk et al., 2010; Gagalyuk, 2011; Herzlieb, 2011). A number of studies motivated the use of PLS by relatively small sample sizes and explorative character of their research. Schulze et al. (2006) investigated relationship quality in the German pork and dairy sectors based on 566 face-to-face interviews. Storer et al. (2004) evaluated a model of inter-organisational information systems used to manage chains of organisations using the data set of 111 Australian food processors. Lu et al. (2008) studied the role of Guanxi networks and buyer-seller relationships based on 167 interviews vegetable farmers (i.e., sellers) and 84 interviews with vegetable processing and exporting companies (i.e., buyers). Gyau and Spiller (2009) used the PLS approach to study buyer-seller relationship performance in agribusiness based on 101 interviews with firms from the Ghana Fresh Produce Industry Directory. Gagalyuk (2011) investigated the goal achievement in supply chain networks on the example of the Ukrainian agri-food business by using a data set of 101 branded food processing companies. PLS was also used for even smaller sample sizes (e.g., 67 − in Herzlieb (2011) and 31 − in Gagalyuk et al. (2010)).

Therefore, the decision to use PLS in these studies was based on such considerations as small sample sizes; early stages of research development with high complexity and low theoretical information; theoretical problems such as inadmissible solutions (i.e., negative error) and factor indeterminacy (i.e., nonconvergence) have been identified with LISREL's maximum likelihood estimation (MLE); as well as the possibility to use both formative and reflective indicators simultaneously. In the end there is no 'one-fits-all' approach for all samples and research settings. Each researcher must consider a number of factors before choosing the specific method. According to Wold (1982), PLS and LISREL should not be viewed as competitive but rather complementary methods for the estimation of the same type of path models.

There is no doubt that PLS path modeling is very popular among scientists and practitioners worldwide. There are some major reasons for that. Firstly, PLS path modeling algorithm allows using both reflective and formative way of modeling without causing any problems as is the case in LISREL. Secondly, PLS can be used to estimate models for fairly small samples, which is simply not possible in LISREL. Thirdly, PLS can cope with complex models with a high number of latent and manifest constructs in relation to the number of observations without causing estimation problems. Fourthly, PLS path modeling uses few or no distributional requirements.

7.1.2 Measurement Model Specification and Evaluation of Results

PLS Path Modeling is designed for estimating separately the measurement model and, in a second step, the structural model coefficients. There are two kinds of outer models: formative and reflective. The selection of a certain outer mode depends on the theoretical argumentation (Diamantopoulos and Winklhofer, 2001). The discussion about the distinction between reflective and formative ways of model specification in the PLS path modeling has recently been intensified. It is not easy for a researcher to choose the right specification of the model due to a number of controversies about pros and cons in using a formative or a reflective model in the literature. In fact, both types of models have their own advantages and disadvantages and have their degree of importance. Coltman et. al. (2008) points out that the reflective modeling is used more in the psychological and management sciences areas, whereas the formative modeling – in the economic and sociology areas. It is extremely important to choose the right one, since a misspecification of the model might lead to invalid results of model estimation or may lead to a misinterpretation of the results (Christophersen and Kondrat, 2008), the shaping of underestimated or over balanced parameters (Diamantopolous et al., 2008), cause damage to the results of the study (Baxter, 2009) or could affect the conclusions about the theoretical relationships among the constructs (Jarvis et al., 2003). The problematics of choosing the right model is rooted in the fact the formative model was introduced just recently and therefore many researchers have "grown" with the reflective model (Diamantopolous et. al., 2008). This fact is often the reason why many researchers choose a reflective way of modeling though the formative would be more appropriate. However, the choice of the model should have a strong support from the theoretical as well as from methodological point of view and should be conceptually justified. Therefore, it appears to be very important to specify the list of criteria which helps the researchers to decide about the choice of the model and to distinguish between formative and reflective measurement models. Many researchers have opened conceptual discussions about the differences between formative and reflective measurement models (Bollen and Lennox, 1991; Diamantopoulos and Winklhofer, 2001; Edwards and Bagozzi, 2000) in order to contribute to the creation of the comprehensive list of such criteria. Baxter (2009) and Diamantopolous (2010) represent the opinion that it is not possible to identify the construct as formative or reflective from the very beginning. One should rather think about the definition of the construct given by the researcher and ask oneself about the research question in this specific model. Therefore, each researcher should keep in mind that each model has its own research aims and theoretical and conceptual backgrounds and there is no one ready recipe for the right model.

The reflective measurement model has a long tradition in social sciences and is rooted in classical test theory (Lord and Novick, 1968) and psychometrics (Nunnally and Bernstein, 1994). According to this view, manifest indicators represent effects of an underlying latent construct. In other words, the reflective way of modeling is based on the reflective indicators. As the term implies reflective indicators represent reflections, or manifestations, of a latent construct. The main difference between reflective and formative models lies in the direction of causality between the latent variable and its indicators (Christophersen and Kondrat, 2008). The causal direction goes from the latent variables to the reflective item indicators, thus, observed measures are assumed to reflect variation in the latent variable. According to the causal relationship in the case of reflective model, the variation in a construct leads to corresponding variation or modification in its indicators (Bollen 1989). Another difference of the reflective model compared to the formative model is that reflective indicators are interchangeable. This means that changing or simply eliminating

one or more indicators does not affect the latent variable and won't result in alternations of its content. Reflective indicators are seen as dependent on a latent variable (Bollen and Lennox, 1991). Since each latent variable is considered a uni-dimensional concept, one of the conditions reflective indicators should fulfil is that they should be highly correlated with one another and can be interpreted as a criterion for high internal consistency.

Formative measurement seems to be relevant in the study of organizational or social constructs when the unit of analysis is groups or companies (Diamantopoulos and Winklhofer, 2001). This kind of measurement was for the first time mentioned by Curtis and Jackson (1962), who argued that in some cases measures show negative or zero correlations despite capturing the same concept. In other words, the indicators determine the latent variable which receives its meaning from the former. Diamantopoulos and Winklhofer (2001) stated that the origins of the formative measurement lie in the operational definition of the model. In the case of formative modeling each manifest indicator represents a small part of the whole composite latent construct (Diamantopolous et. al., 2008). Such manifest indicators represent independent "causes" of the construct and are measured with little correlation between them. In order for the latent construct to be complete, all manifest indicators need to be present in order to adequately specify the measured construct. Formative indicators represent distinctive dimensions of the construct. In this case we speak about a multidimensional concept. A formative measurement model has the opposite direction of causal relationships between the latent variables and the manifest indicators. Some authors refer to formative indicators as causal indicators that create emergent constructs (Bollen and Lennox, 1991; Williams et al., 2003). Since the manifest indicators represent parts of the whole construct, they are all equally important for the estimation, and, thus, elimination of one of them will result in reductions of scale validity. Unlike reflective (effect) indicators, formative (cause) indicators are generally not interchangeable.

In general there are several characteristics of formative measurement models, which make them distinct from the reflective ones. Firstly, in the formative model each manifest indicator represents a specific part or domain of the latent construct and is not interchangeable. Secondly, formative indicators might correlate positively or negatively or lack any correlation at all (Bollen, 1984). Thirdly, a formative measurement model in contrast to reflective one is under-identified in isolation and, thus, cannot be estimated (Bollen, 1989). Fourthly, formative indicators are assumed not to have individual measurement error terms, which means that they are assumed to be error-free (Edwards and Bagozzi, 2000).

The difficulty of choosing has been acknowledged by many scientists. Some of them tried to make a list of criteria to allows differentiation between these two models. Coltman et al. (2008) developed three theoretical ideas which could be taken into account when the problem of such a choice appears.

One of the ideas is rooted in the nature of the construct: in the reflective measurement model the construct is independent whereas in the formative measurement model it depends on its items. The second idea was connected to the direction of causality between the latent and its manifest constructs. In the formative measurement models the direction of causality flows from the measures to the construct, and in the reflective measurement models it has the reverse direction. The third idea took into account the characteristics of the indicators: in the reflective models the items are interchangeable, whereas in the formative models, the construct cannot be interchanged or eliminated). Since all indicators were assumed to represent the same construct in the reflective model and, thus, be interchangeable, they also should all have the same antecedents and consequences. In the formative model, since the items do not necessarily capture the same aspects of the latent

construct, they are not necessarily interchangeable. Therefore, it cannot be expected that they have the same antecedents and consequences. Other researchers mentioned some criteria on the basis of their empirical concerns. One of them is the intercorrelation between the items. In the reflective model the correlations are usually expected to be high, whereas in the formative model correlations might not even exist. However, Wilcox et. al. (2008) state that this rule is not a sufficient criterion to be relied on, since it may lead to unjustified reliability in the quality of the measurement. According to Jarvis et al. (2003), the decision to choose the appropriate model should be based on the following four major criteria: the direction of causality from a latent construct to its indicators; interchangeability of indicators; covariation among indicators.

Generally there are mixed opinions about the use of formative and reflective measurement models. Wilcox et al. (2008) represent the opinion that in the context of theory testing the formative measurement models should be preferred as a better alternative to the reflective one. On the other hand, there are some problems of dealing with formative latent constructs statistically. One of the problems is that the estimation of parameters of a formative model within a structural equation model is not possible without linking the latent variable to at least one other latent variable. Another problem is that the estimates could be biased if there is a critical degree of multicollinearity between the formative indicators. Therefore, multicollinearity is considered to be an undesirable property in formative models as it causes estimation difficulties (Albers and Hildebrandt, 2006; Diamantopoulos and Winklhofer, 2001). Generally scientists should consider all these pros and cons before choosing the reflective or the formative model for their specific research.

Since the modeling process of PLS is separated into two conceptual stages of analysis (measurement and structural), the results of the modeling are also analyzed in two steps. In order to analyze and interpret the results of the PLS path modeling it is necessary to assess the validity of the measurement model and, in the second step, to assess the structural model. Since the measurement model represents the causal relations between the manifest variables and its corresponding latent variables, the assessment of the measurement model aims to prove how the manifest variables relate to their latent variables. Depending on the kind of model (reflective or formative) the steps of assessing the measurement model are different[11]. As the structural model answers the questions about the causal relations among the latent variables or theoretical constructs, the assessment of the structural model pursues the aim to analyze the way how those latent variables related to each other and to see whether the assumed hypotheses about latent variables' relationships among themselves are true.

Reflective model
The main aim of assessment of the measurement model is to evaluate the quality of construct measurement. Different researchers have suggested the following basic assessment techniques in order to analyze the reflective measurement model. The stepwise assessment approach for reflective measurement models adapted from Henseler et al. (2009) and Lehner and Haas (2010) is presented in Table 7.

Generally there are two main stages in assessing the reflective measurement models: (1) assessment of reliability on the indicator level (individual item reliability) and (2) assessment of the reliability on the level of a given construct (internal consistency, discriminant validity etc.) (Fornell and Larcker, 1981; Fornell, 1982; Bagozzi and Yi, 1988; Barclay, et al., 1995).

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[11] The description of the process of assessing formative measurement models was omitted due to the fact that this study employs reflective measurement model.

Table 7. Assessing reflective measurement models

Criterion	Description
Indicator reliability	Degree of explanation of the indicator variance through the construct. Absolute standardized outer (component) loadings should be higher than 0.7. Generally more than 50% of the variance of the indicator should be determined by the construct, this means loadings $\lambda > 0.7$. Elimination of indicators with loadings $\lambda < 0.4$.
Composite reliability (ρ_c)	$\rho_c = (\sum \lambda_i)^2 / [(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)]$, where λ_i is the outer (component) loading to an indicator, and $Var(\varepsilon_i) = 1 - \lambda_i^2$ in case of standardized indicators. Degree of explanation of the fit of the measurement of the construct and its respective indicators. The composite reliability is a measure of internal consistency and must not be lower than 0.6.
Average variance extracted (AVE)	$AVE = (\sum \lambda_i^2) / [\sum \lambda_i^2 + \sum Var(\varepsilon_i)]$, where λ_i is the component loading to an indicator and $Var(\varepsilon_i) = 1 - \lambda_i^2$ in case of standardized indicators. AVE should be higher than 0.5.
Fornell-Larcker criterion	In order to ensure discriminant validity, the AVE of each latent variable should be higher than the squared correlations with all other latent variables. Thereby, each latent variable shares more variance with its own block of indicators than with another latent variable representing a different block of indicators.
Cross-loadings	Cross-loadings offer another check for discriminant validity. If an indicator has a higher correlation with another latent variable than with its respective latent variable, the appropriateness of the model should be reconsidered.

Source: Adapted from Henseler et al. (2009) and Lehner and Haas (2010)

However, some researchers are more specific in evaluating the details within these categories. According to the reviewed literature the following three aspects are relevant for assessing the reflective measurement model: indicator reliability, composite reliability (internal consistency of the model), construct validity (convergent validity and discriminant validity).

The indicator reliability is assessed in PLS by analyzing the loadings of the manifest variables representing their respective composite latent constructs. This criterion can be used to say how much of an indicator's variance can be explained by the corresponding latent variable. In an ideal case this indicator should be at least 50%. This implies that over 50% of the variance in the manifest variable is due to the latent variable. The opinions about the acceptable threshold values differ, however, across the studies. Generally it is recommended to accept indicators with loadings of 0.7 ($\approx \sqrt{0.5}$) or more (Carmines and Zeller, 1979). This rule is also called 'a rule of thumb'.

However, there are some researchers which represent the opinion that dropping some indicators just because of the statistical reasons is not always appropriate. As a consequence, there are some followers of this idea which use much weaker loadings. This seems to be especially the case when a model is newly developed and requires some testing (Hulland, 1999). The lower threshold value has been established at 0.4. In any case, when dealing with reflective measurement models indicators with loadings lower than 0.4 should be eliminated from measurement models (Churchill, 1979; Hulland, 1999). In some well explained cases factor loadings of at least 0.4 could be retained in the model (Hair et al., 2006). According to Henseler et al. (2009) there could be several reasons for low loadings of the indicators: a poorly worded or formulated question or item; an inappropriate question or item; an inappropriate use of an item in the specific context or settings or an improper transfer from one context to another. The first problem results in

low reliability. The second to low content (or/and construct) validity. The third problem leads to nongeneralizability of the specific item in different contexts or settings. In spite of these problems there are still some cases when researchers retain indicators with low loadings (less than 0.4) for sound theoretical reasons (Fornell et al., 1990).

Nevertheless, even when there are some strong theoretical reasons for keeping certain indicators in the model despite its low loadings, one should keep in mind that these constructs will probably contribute little to the explanatory power of the whole model. The results of such models should be analyzed with great caution, since the parameter estimates of the constructs could be greatly biased. Generally the rule of factor analysis dictates that items with loadings of less than 0.5 or 0.4 (the minimum threshold of tolerance) should be excluded from the model. By eliminating these indicators we pursue the aim of improving the explanatory power of the model and reliability of the results. On the other hand, according to Henseler et al. (2009), eliminating indicators is also not always optimal for the model due to the nature of PLS path modeling. One should always check whether the elimination of a certain indicator will really lead to the improvement of composite reliability. Only in this case the elimination of the indicator is justified.

Following Fornell and Larcker (1981) after examining the reliability of indicators (based on factor loadings) one should proceed with assessing the internal consistency of the model. The internal consistency of the model is usually assessed by calculating composite reliability (Barclay et al., 1995). Composite reliability is used to examine how well a construct is measured by its indicators. According to Fornell and Larcker (1981) and Hair el al. (1998) a recommended rule of thumb for composite reliability is 0.7 (minimum acceptable value). The low level of internal consistency can result from a variety of reasons. Some of them could include poor conceptual definition of the construct or the multidimensionality of the construct. To cope with this problem one might consider splitting the multidimensional construct into several uni-dimensional constructs in order to improve the internal consistency of the model.

Construct validity represents the extent to which practical measures or operationalizations of a construct actually capture what was designed in the theory. In other words, it answers the question of whether the designed survey instrument at hand actually measures what it is supposed to measure. In order to examine the construct validity, convergent validity and discriminant validity are usually used. Convergent validity refers to the degree to which a measure is correlated with other measures (according to what was said in the theory). Discriminant validity refers to the degree to which the operationalization of the construct does not correlate with other operationalizations (as it should not be correlated with from the theoretical point of view). Convergence represents the degree to which two or more attempts to measure the same concept are in agreement (Campbell and Fiske, 1959). Fornell and Larcker (1981) argue that convergent validity could be measured by Cronbach's alpha and the internal consistency of the model. Cronbach's alpha shows how well a set of indicators measure a latent construct. Generally Cronbach's alpha varies between 0 and 1. According to Hair et al. (2006) the acceptable threshold for Cronbach's alpha is 0.6. As a complement to convergent validity usually discriminant validity is examined. Discriminant validity represents the degree to which the measures of a given latent construct differ from the measures of other latent constructs in the model. Fornell and Larcker (1981) suggest the use of Average Variance Extracted (AVE) in order to assess discriminant validity. AVE represents the variance of its indicators captured by the construct relative to the total amount of variance, including the variance due to measurement error. The threshold value of AVE equals 0.5 (minimum acceptable value) (Homburg and Giering 1996; Rodgers and Pavlou, 2003). The second criterion for measuring the discriminant validity is suggested to be the square root of the AVE (Chin,

2001). This criterion is also called the Fornel-Larcker test (Fornel and Larcker, 1981) according to which the correlations between the different constructs in the model must be smaller than 0.8. The third criterion concerns examining how each item is related to the latent construct (item loadings and cross-loadings on the constructs). The rule is that no item should be more loaded on the other constructs than it is on its corresponding construct. In case of fulfilment of all of these criteria the discriminant validity of the model is supposed to be achieved.

Structural model

After assessing the measurement model the assessment of the structural model may begin. Unlike the measurement model, which deal with relations between manifest and their corresponding latent variables, the structural model deals with relations among the latent constructs. In this case we take a closer look at the hypothesised relationships among variables which predict (exogenous) the other dependent (endogenous) variables. Opposite to covariance-based methods PLS allows only for non-parametrical tests in order to evaluate the quality of the structural model.

One of the criteria used for this assessment is the endogenous variables' determination coefficient (R^2) (Chin, 1998). It is interesting to note that the threshold value of this coefficient differs depending on the area of research. In the social sciences the values of 0.4-0.6 are accepted as normal (Bollen, 1989; Herting and Costner, 1985), whereas behavioural sciences even regard the value of 0.2 as acceptable (Rosenthall et al., 2000). For PLS Chin (1998) suggested using the following evaluation frame for R^2: 0.67 (substantial), 0.33 (moderate), and 0.19 (weak). He stated that in case the endogenous variable is related to several exogenous variables, the level of R^2 of this endogenous variable should be substantial. One may accept even lower levels of R^2 if there is no other possibility. However, one must keep in mind that lower levels of this coefficient are undesirable and might cast doubts on the theoretical basis of the model.

The next criterion is the estimation of individual path coefficients in the structural model, which represent standardized beta coefficients of ordinary least squares regressions. In order to test the goodness-of-fit of the path coefficients the method of *t*-statistics could be used through resampling (Venaik et al., 2001). In order to test the hypotheses one must quantify the paths' significance (by means of a resampling method) and examine the absolute values of the relationships. The PLS results for all bootstrap samples provide the mean value and standard error for each path model coefficient (Henseler et al., 2009). This enables a *t*-test to be performed for significance of path model relationships at a certain significance interval. Signs of the values play a special role. In case the values are significant and the signs are positive, the model provides the empirical support of hypothesized effects. If the values are insignificant and the signs are contrary to the assumed effects, the hypotheses are not supported.

The next two criteria for assessment of the structural model are effect sizes and prediction relevance. The effect size can be calculated as the increase in R^2 relative to the proportion of variance of the endogenous latent variable that remains unexplained. According to Cohen (1988), the values of 0.02, 0.15, and 0.35 refer to "small", "medium", and "large" effects respectively.

The last criterion for assessment of the structural model recommended by Henseler et al. (2009) is the prediction relevance of the model (The Stone-Geisser criterion) and can be measured using blindfolding procedures. During the parameter estimation the blindfolding procedure systematically removes some raw data from the sample treats these data as missing and reconstructs the missing during the estimation process. The stepwise approach

for assessment of structural models adapted from Henseler et. al. (2009) is presented in Table 8.

Table 8. Assessing structural models

Criterion	Description
R^2 of endogenous latent variables	R^2 values of 0.67, 0.33, or 0.19 for endogenous latent variables in the inner path model are described as substantial, moderate, or weak
Estimates of path coefficients	The estimated values for path relationships in the structural model should be evaluated in terms of sign, magnitude, and significance (the latter via bootstrapping).
Effect size f^2	Values of 0.02, 0.15, and 0.35 can be viewed as a gauge for whether a predictor latent variable has a weak, medium, or large effect at the structural level
Prediction relevance	Values above zero give evidence that the observed values are well reconstructed and that the model has predictive relevance(Q^2-values below zero indicate a lack of predictive relevance)

Source: Adapted from Henseler et al. (2009)

After describing the algorithm of PLS path modeling in detailed steps we would like to draw your attention to the fact that this techniques of SEM is in our opinion the most appropriate for conducting estimations of exploratory character as well as for theory building. As mentioned in the previous chapters, due to a number of distinct features and advantages of PLS in comparison to covariance-based methods it can be considered one of the most powerful and valuable tools of SEM. In our opinion, under no condition should PLS be regarded as insufficient or disadvantageous since it is designed to fulfil specific aims in specific settings.

7.2 Model Assessment using Partial Least Squares (PLS) Path Modeling
7.2.1 Determining the Minimum Sample Size

Before starting the model assessment we would like to explain our argumentation on determining the sample size. The issue of heterogeneity among units is an important one in statistical analysis. In fact, treating the sample as homogeneous, when it is not, may influence the quality of the results and lead to biased interpretation (Vinzi et al., 2010). Since only the first group (food processors) represents the sufficient number of observations in order to use the data for testing our hypotheses by using structural equation modeling, we decided to use only the data gained from the respondents of the first group. In this way we avoided the heterogeneity of the sample. Therefore, we deleted the data about the retailers from the dataset. Those were 8 data records. As a result we have worked only with 89 data records for conducting PLS Path Modeling. We might argue that all 97 data units are homogeneous, since they are recognized as "focal companies", no matter whether they are processors and retailers. But for the purpose of keeping the results of PLS as pure as possible and in order to avoid any bias due to the sensitivity of the statistical analysis, we have decided to "purify" our dataset. Also, the number of observations was reduced from 97 to 89, which still is sufficient number for conducting PLS Path Modeling. In order to confirm the fact that our sample size was indeed sufficient we have performed statistical power analysis. Statistical power analysis can be used to calculate the minimum sample size required using an expected effect size and the number of predictors. A priori

power analysis is conducted prior to the research study, and is typically used in estimating the sufficient sample size.

According to Cohen (1988) the effect sizes f^2 of 0.02, 0.15, and 0.35 are treated in statistical analysis as small, medium, and large, respectively. α is also known as the p-value, probability, or type I error rate. This value should be less than or equal to 0.05 to claim statistical significance. The number of predictors (independent variables) in our model is 6. In order to conduct statistical power analysis we used software package G*Power 3.1, which was recommended by some researchers as being reliable and easy to use (Park, 2010).

We have calculated the minimum sample size several times depending on the expected effect sizes and the value of statistical power. Most researchers assess the power of their tests using 0.80 as a standard for adequacy. However, by convention, this value should be greater than or equal to 0.80 and could reach the maximum range of 0.99 (Cohen, 1977). Therefore, we run the calculation by using the value of 0.8 as the minimum requirement for this indicator. As shown in Figure 14, the recommended sample size varied from 43 (in case of the value of power 0.80) to 107 (in case of the value of power 0.80).

Figure 14. Calculation of minimal sample size using G*Power
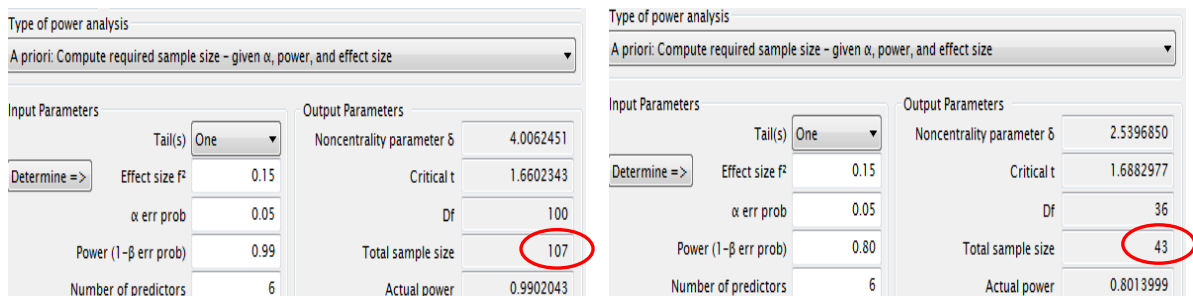
Source: own accomplishment

The effect size f^2 was set to be medium (0.15) in our case. However, this issue is determined according to the expectations the researcher has on his model and the strength of his or her theoretical concept. The results of the calculations are presented in Table 9.

Table 9. Minimal sample size depending on statistical power and expected effect size f^2

Statistical power	Medium effect size f^2 (0.15)	Large effect size f^2 (0.35)	Statistical power	Medium effect size f^2 (0.15)	Large effect size f^2 (0.35)
0.8000	42.8349	19.7586	0.9000	58.6327	26.3229
0.8100	44.0381	20.2519	0.9100	60.9585	27.3001
0.8200	45.2998	20.7707	0.9200	63.5386	28.3863
0.83000	46.6264	21.3179	0.9300	66.4399	29.6098
0.8400	48.0257	21.8966	0.9400	69.7596	31.0123
0.8500	49.5069	22.5108	0.9500	73.6481	32.6577
0.8600	51.0811	23.1652	0.9600	78.3557	34.6531
0.8700	52.7617	23.8655	**0.9700**	**84.3490**	37.1975
0.8800	54.5655	24.6189	**0.9800**	**92.6671**	40.7349
0.8900	56.5135	25.4341	0.9900	106.590	46.6668

Source: own accomplishment

Therefore, one could assume that the expected effect could be stronger than medium, which is large (0.35). In Table 9 we present the results of the calculation of minimal sample size using a range of statistical power (0.80-0.99) and two kinds of effect sizes f^2 medium (0.15) and large (0.35). Our sample size of 89 respondents is within the acceptable range.

If we assume the expected effect size f^2 to be medium, the statistical power will range between 0.97 and 0.98 (marked red in Table 9). For the large effect size our sample is even more than sufficient. At the value of statistical power of 0.99 the required minimal sample size would be 46.7, which is lower than our sample of 89. The calculation of minimal sample size using G*Power is also shown in Figure 15.

Figure 15. Graphical representation of minimal sample size calculation using G*Power
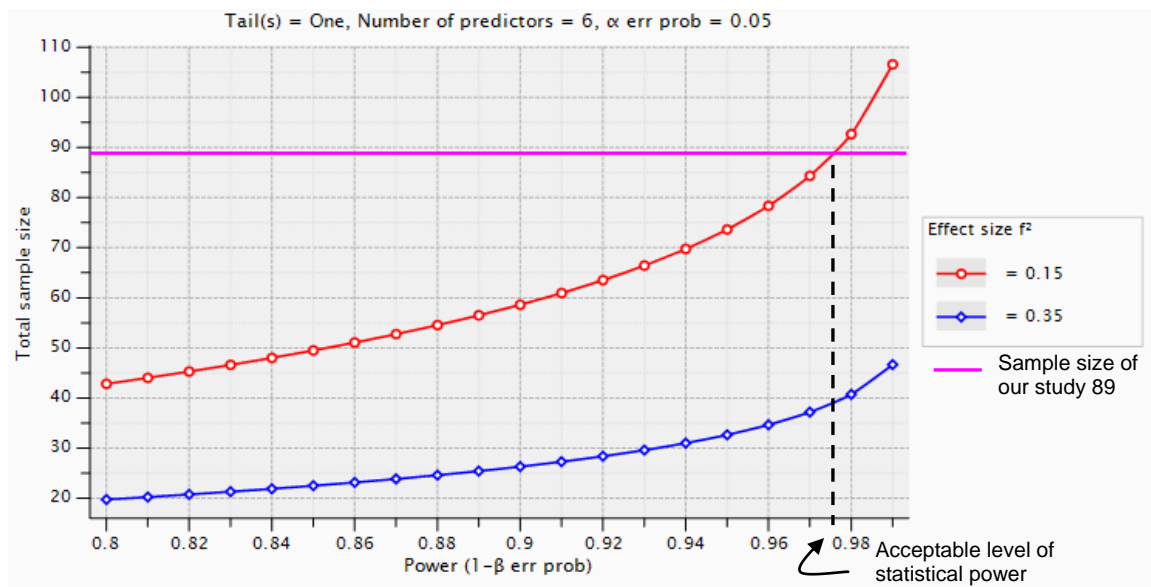
Source: own accomplishment

According to other previously mentioned methods for determining a minimum sample size sufficient for conducting the research using PLS our sample is also within the acceptable range. According to a strong rule of thumb the sample size should be ten times the largest number of structural paths directed at a particular construct in the structural model (Chin, 1997). There is also the weak rule of thumb which suggests using a multiplier of five instead of ten for the described requirements (Tabachnik and Fidell, 1989).

In our case the largest number of structural paths directed at a particular construct 6, which requires the sample size to be between 60 (strong rule of thumb) and 30 (weak rule of thumb). Therefore, according to the conducted statistical power analysis as well to other known methods found in the literature the sample size of our study (89) is by all means within the acceptable range in spite of deleting 8 units from our dataset due to homogeneity reasons.

7.2.2 Operationalization of Variables and Model Assessment

In order to develop measurement scales for a theoretical construct it is necessary to exactly delineate what is included and what is excluded from its conceptual specification. This step was accomplished in the previous theoretical chapters of this thesis. The next step would

be to determine the dimensionality of the construct taking into account its theoretical definition. We have looked at the concept of SCM through the lenses of two simultaneous tasks – coordination (alignment of actions) and cooperation (alignment of interests) according to Hanf and Dautzenberg (2006). The concept of influence strategies was adapted from French and Raven (1959) and Raven and Kruglanski (1970). In order to specify the operational measures of these concepts the review of the existing marketing and management literature was conducted using the theoretical consideration and finding of *Chapters 2-3*. The result of the review of this literature can be found in Appendix 14.

After summarizing and analyzing the possible operationalizations of the variables for our constructs proposed in the previous studies we discovered that some constructs were not operationalized very often so far. The constructs *Coordination* and *Cooperation* were operationalized by using some doubtful straightforward expressions without taking into account the multi-dimensional nature of those constructs. For example, Boyle et al. (1992) used the operationalization "*The business relationship our dealership has with our supplier could better be described as a "cooperative effort" rather than an "arm's length negotiation*" for the construct *Cooperation*. Another unacceptable in our view operationalization of the construct *Coordination* was suggested by Mohr et al. (1996): "*Our activities with this manufacturer are well-coordinated*". We do not agree with these operationalization of the mentioned constructs, since they use such words as "coordinated" or "cooperative" in their formulations. In such a case the answers of the respondents should be treated with great caution, since the understanding of the formulation could be different among respondents. Some people understand something different under the term "coordination" and "cooperation". Therefore, we had to create new measures and we were partially inspired by the previously used measurement scales. As far as the construct *Influence Strategies* is concerned, we have made a thorough literature review of the existing operationalizations of these concepts. We used the results of the literature review in order to develop our own operationalizations of the constructs. Considering the argumentation from the previous chapters and evasive literature review on construct measurement and scale development which can be found in appendices we developed the formulation of questions in order to measure the theoretical constructs in our model[12].

In order to test our model, we used the Partial Least Squares (PLS) technique for Structural Equation Modeling (Wold, 1982). The data was coded according to the Unipark Software. Since SmartPLS cannot handle missing values that are left blank and in order to avoid having to remove or impute these missing values, recoded them using the constant number -999, which is never used elsewhere in the dataset.

The initial model as it was represented in the SmartPLS software is shown in Figure 16. The blue ovals represent the latent constructs, whereas the yellow rectangular-shaped figures represent the manifest variables. Since we had two different samples (answers of experts with respect to their relationships with suppliers and with buyers) we were able to run our model two times and received two different models. Model 1 refers to Sample 1 (answers of experts with respect to their relationships with suppliers), whereas Model 2 refers to Sample 2 (answers of experts with respect to their relationships with buyers) accordingly (see also Belaya and Hanf (2011a) and Belaya and Hanf (2011b) for further details). In both cases there are 89 observations and initially 8 latent and 54 manifest variables.

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[12] In Appendices 13-16 you can find the graphical representation of the theoretical model, information about the reviewed literature on operationalization of variables, developed measurement scales and factor loadings of manifest variables after removing indicators with loading less than 0.4.

Figure 16. Graphical representation of the model in SmartPLS (initial model)
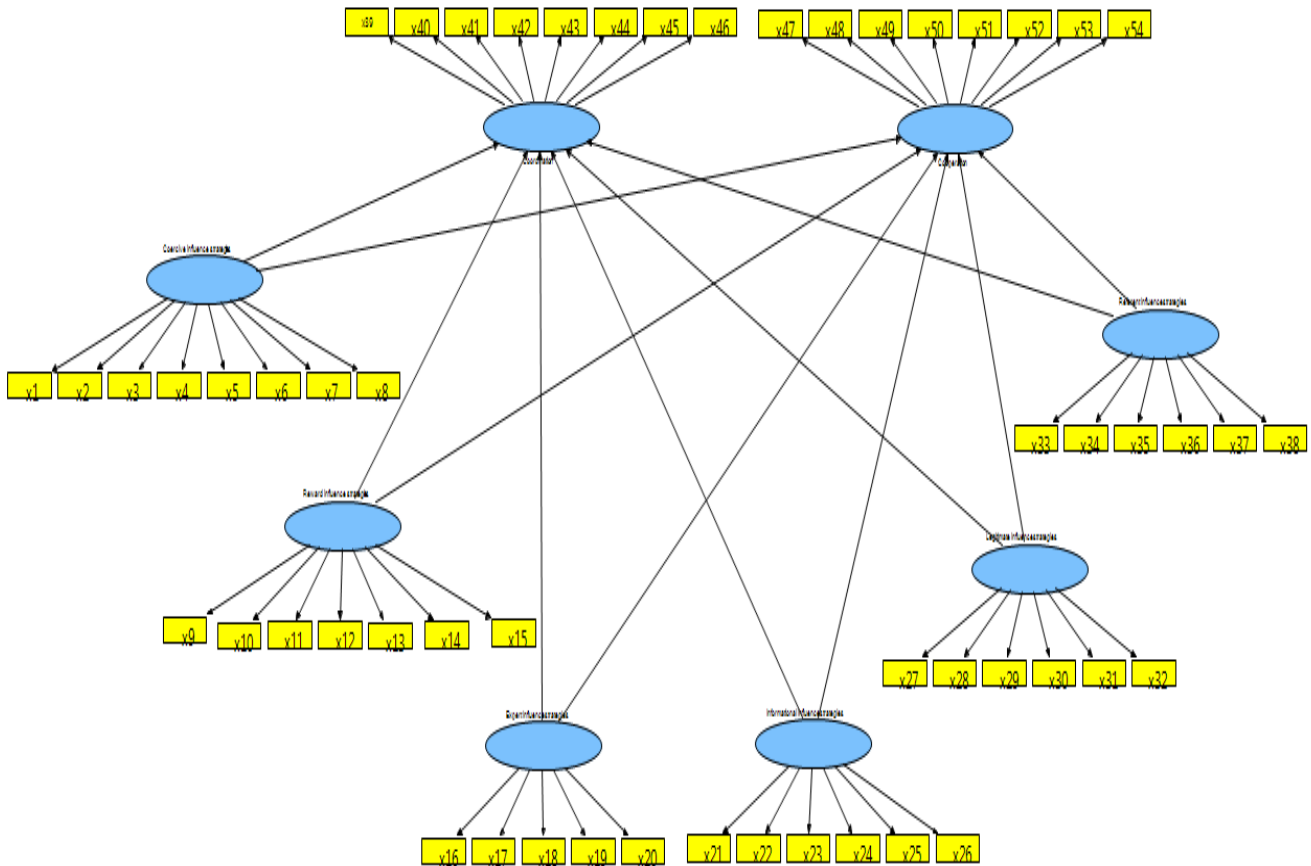
Source: own accomplishment

7.2.3 Evaluation of Results

The evaluation of results of the PLS path modeling is accomplished in two steps: 1) the assessment of the measurement (outer) model and 2) the assessment of the structural (inner) model (Chin, 1998).

Measurement model

In our case the measurement model is a reflective one. The outer model is evaluated by examining the individual item reliabilities and convergent validity of the model. The individual item reliabilities are examined through the factor loadings of the items on their respective constructs.

According to Hair et al. (2006), an item is considered insignificant and removed from the model if its factor loading is less than 0.4. The remaining indicators represent more than 50% of the share of the variance of each indicator in respect to the corresponding latent variable and can be considered as the most reliable. Based on this criterion we removed 23 indicators from the initial model for calculations with Sample 1 (Model 1) and 21 indicators from the initial model for calculations with Sample 2 (Model 2) in order to achieve the indicator reliability for our model.

Both final models after eliminating indicators with loadings less than 0.4 are presented in Figure 17[13].

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[13] For a better view of the factor loadings of manifest variables please refer to the appendix.

Figure 17. Graphical representation of Models 1 and 2 in SmartPLS
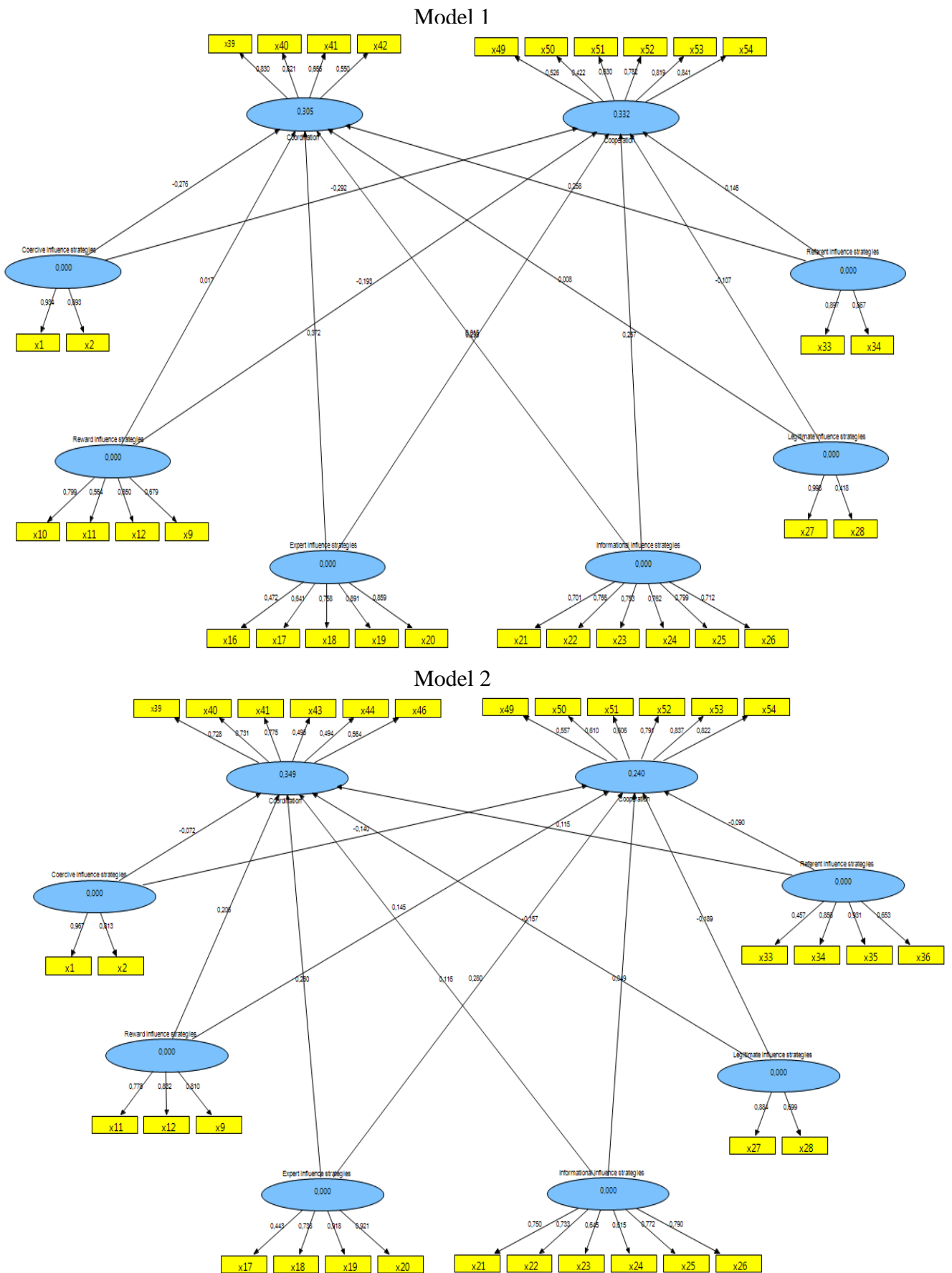
Model 1

Model 2

Source: own accomplishment

The removed items of Model 1 included 6 items of the latent construct *Coercive influence strategies,* 2 items of the latent construct *Reward influence strategies,* 1 item of the latent construct *Expert influence strategies,* 4 items of the latent construct *Legitimate influence strategies,* 4 items of the latent construct *Referent influence strategies,* 4 items of the latent construct *Coordination and* 2 items of the latent construct *Cooperation.* The removed items of Model 2 included 6 items of the latent construct *Coercive influence strategies,* 3 items of the latent construct *Reward influence strategies,* 2 item of the latent construct *Expert influence strategies,* 4 items of the latent construct *Legitimate influence strategies,* 2 items of the latent construct *Referent influence strategies,* 2 items of the latent construct *Coordination and* 2 items of the latent construct *Cooperation.*

The internal consistency of the model was assessed by calculating the Cronbach α and composite reliability. The convergent validity of the model was assessed by calculating the Average Variance Extracted (AVE) (Fornell and Larckner, 1981). The respective criteria are presented in Table 10.

Table 10. Results of the assessment of measurement model: Cronbach's α, Composite Reliability, and AVE

Latent variables	Cronbach's α		Composite Reliability		AVE	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Coercive influence strategies	0.805315	0.778146	0.910199	0.886624	0.835268	0.797551
Reward influence strategies	0.734857	0.734671	0.817823	0.848309	0.534618	0.651028
Expert influence strategies	0.807736	0.821133	0.852956	0.853335	0.547956	0.608071
Informational influence strategies	0.846552	0.824309	0.884829	0.865199	0.561973	0.518871
Legitimate influence strategies	0.523012	0.441932	0.706973	0.774371	0.584865	0.634991
Referent influence strategies	0.715612	0.753124	0.875101	0.826240	0.777990	0.558718
Coordination	0.719285	0.719619	0.813111	0.802739	0.527487	0.412268
Cooperation	0.757797	0.809357	0.836368	0.858112	0.473304	0.508580

Source: own accomplishment

Cronbach's *α* is a measure of internal consistency and must not be lower than 0.6. In our case all variables except for *Legitimate influence strategies* have their Cronbach's *α* within the borders of the advised number. Unfortunately, the measure of Cronbach's *α* for *Legitimate influence strategies* is 0.523 (suppliers) and 0.442 (buyers) which is slightly lower than 0.6.

In spite of this fact, the composite reliability is achieved for this variable as it is done for all the other variables. The composite reliability index is more reliable in assessing convergent validity because it takes into account the relative weights of the various indicators in a latent construct while Cronbach's α assumes equal weights (Gyau and

Spiller, 2009).The composite reliability is a measure of internal consistency and must not be lower than 0.6. In our case it is even better, since it is over 0.7.

Average Variance Extracted (AVE) should be higher than 0.5. The variable which does not quite correspond with this rule in Model 1 (suppliers) is *Cooperation*. The measure of AVE for this construct is slightly lower and equals 0.473. The variable which does not quite correspond with this rule in Model 2 (buyers) is *Coordination*. The measure of AVE for this construct is also slightly lower and equals 0.412. AVE value means that a latent variable is able to explain more than half of the variance of its indicators on average.

Structural model

The next step of our analysis is to evaluate the fit of the structural (inner) model. The fit of the inner model was evaluated by the discriminant validity criterion which means that every construct is significantly different from the others. In order to do that it is necessary to assess discriminant validity by comparing the square root of the AVE with the correlation between the construct and the other constructs. The square root of the AVE should be higher than the correlation between the constructs (Gyau and Spiller, 2009). Besides, the positive sign of the correlation coefficient (r) indicates that the construct experiencing the influence of the respective construct increases in case the respective construct increases. If the sign is negative, it means that the increase of the first construct causes the decrease of the construct at influence. The results are shown in Table 11.

Table 11. Correlations of the latent variables and the AVE square roots[14]

	CIS	COOP	COOR	EIS	IIS	LIS	RFIS	RWIS
Model 1								
CIS	**0.913930**							
COOP	-0.249700	**0.687971**						
COOR	-0.181373	0.423507	**0.726283**					
EIS	0.179414	0.375932	0.419556	**0.740241**				
IIS	0.128049	0.372067	0.271215	0.580504	**0.749649**			
LIS	0.435816	-0.306813	-0.248269	-0.199264	-0.158320	**0.764765**		
RFIS	0.086310	0.257241	0.360260	0.321386	0.273676	-0.209867	**0.882037**	
RWIS	0.048065	0.085145	0.231527	0.423462	0.384902	-0.295605	0.260505	**0.731176**
Model 2								
CIS	**0.893057**							
COOP	-0.285831	**0.713148**						
COOR	-0.247836	0.586470	**0.642081**					
EIS	-0.109092	0.365623	0.471225	**0.779789**				
IIS	-0.056617	0.264067	0.417253	0.679879	**0.720327**			
LIS	0.487454	-0.273312	-0.269026	-0.091556	-0.004559	**0.796863**		
RFIS	-0.148703	0.117118	0.332269	0.335626	0.396946	-0.275824	**0.747474**	
RWIS	-0.229546	0.297968	0.387390	0.347849	0.359489	-0.100979	0.144692	**0.806863**

Source: own accomplishment

The structural model was also evaluated based on the R^2 values and the significance of the path coefficients using bootstrap method. Usually R^2 values of 0.67, 0.33, and 0.19 can be regarded as substantial, moderate, and weak, respectively (Chin, 1998). In Model 1 the

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[14] CIS - Coercive influence strategies; RWIS - Reward influence strategies; EIS - Expert influence strategies; IIS - Informational influence strategies; LIS - Legitimate influence strategies; RFIS - Referent influence strategies; COOR – Coordination; COOP - Cooperation

constructs *Coordination* and *Cooperation* have the value of R^2 0.305 and 0.332 and in Model 2 – 0.349 and 0.240 respectively, which considering the complexity of the research model indicate a good fit. Another way to assess the structural model is to multiply the beta (path) coefficients (b) and correlation coefficients (r) of each latent variable. The results indicate an approximate measure of the variance of the construct explained by the latent predictive variable. In this case values of less than 1.5 % are not making significant contribution to their respective latent variables (Gyau and Spiller, 2009).

It is also necessary to test the goodness-of-fit of the path coefficients. In this case we use the method of *t*-statistics through resampling (Venaik et al., 2001). In order to test the hypotheses one must quantify the paths' significance (by means of a resampling method) and examine the absolute values of the relationships. The results of the assessment of the structural model are presented in Tables 12-13.

Table 12. Results of the assessment of structural model for Model 1

Hypotheses	Constructs	t-statistics	Beta (path) coefficients (b)	Correlation coefficient (r)	b*r
H1a	Coercive influence strategies → Coordination	3.142365	-0.276474**	-0.181373	0.050
H1b	Coercive influence strategies → Cooperation	3.211364	-0.291692**	-0.249700	0.073
H2a	Reward influence strategies → Coordination	0.172568	0.016637	0.231527	0.004
H2b	Reward influence strategies → Cooperation	1.476850	-0.193422	0.085145	-0.016
H3a	Expert influence strategies → Coordination	3.836822	0.372217**	0.419556	0.156
H3b	Expert influence strategies → Cooperation	2.418828	0.292702**	0.375932	0.110
H4a	Informational influence strategies → Coordination	0.130923	0.014832	0.271215	0.004
H4b	Informational influence strategies → Cooperation	2.736924	0.257051**	0.372067	0.096
H5a	Legitimate influence strategies → Coordination	0.078643	0.007748	-0.248269	-0.002
H5b	Legitimate influence strategies → Cooperation	1.037731	-0.107228	-0.306813	0.033
H6a	Referent influence strategies → Coordination	2.910312	0.257730**	0.360260	0.093
H6b	Referent influence strategies → Cooperation	1.588292	0.145881	0.257241	0.038

Source: own accomplishment

According to Park (2008) hypothesis testing should follow the following five steps: 1) stating a null and alternative hypothesis; 2) determining a test size (significance level); 3) computing a test statistic and p-value; 4) decision-making process with regard to rejecting

or accepting the null hypothesis by comparing the subjective criterion and the objective test statistic or p-value; 5) drawing a conclusion and interpreting the results.

Table 13. Results of the assessment of structural model for Model 2

Hypotheses	Constructs	t-statistics	Beta (path) coefficients (b)	Correlation coefficient (r)	b*r
H1a	Coercive influence strategies → Coordination	1.404294	-0.071880	-0.247836	0.007
H1b	Coercive influence strategies → Cooperation	0.854755	-0.140466	-0.285831	0.013
H2a	Reward influence strategies → Coordination	2.475669	0.206322**	0.387390	0.073
H2b	Reward influence strategies → Cooperation	1.718411	0.144823*	0.297968	0.031
H3a	Expert influence strategies → Coordination	2.089951	0.259702**	0.471225	0.100
H3b	Expert influence strategies → Cooperation	2.480495	0.279639**	0.365623	0.065
H4a	Informational influence strategies → Coordination	0.977993	0.116006	0.417253	0.064
H4b	Informational influence strategies → Cooperation	0.395257	0.048864	0.264067	0.013
H5a	Legitimate influence strategies → Coordination	1.907987	-0.157075*	-0.269026	0.021
H5b	Legitimate influence strategies → Cooperation	1.741467	-0.189265*	-0.273312	0.020
H6a	Referent influence strategies → Coordination	1.554594	0.115192	0.332269	0.038
H6b	Referent influence strategies → Cooperation	0.932041	-0.090178	0.117118	-0.008

Source: own accomplishment

According to Martinez-Ruiz and Aluja-Banet (2009), to assess the significance of path coefficients, standard errors and t-values may be computed by bootstrapping (200 samples; t-value >1.65 significant at the 0.05 level; t-value > 2 significant at the 0.01 level). We used the method of bootstrapping (samples = 200) to generate t-statistics to test the significance levels of standardized path estimates. A result is called statistically significant if it is unlikely to have occurred by chance. Therefore, the criterion of significance represents a statement of how unlikely a result must be, if the null hypothesis is true, to be considered significant. The significance levels according to the results of t-statistics are denoted as follows: *=1% and **=5%.

A result is called statistically significant if it is unlikely to have occurred by chance. Therefore, the criterion of significance represents a statement of how unlikely a result must be, if the null hypothesis is true, to be considered significant. The insignificant values with regard to the effects on coordination and cooperation tell us that these findings should be treated with caution.

According to the results of Model 1, six out of twelve hypotheses (H1a, H1b, H3a, H3b, H4b, H6a) were significant and four out of twelve hypotheses (H1a, H3a, H4a, H6a) did not have the expected sign. According to the results of Model 2, six out of twelve hypotheses (H2a, H2b, H3a, H3b, H5a, H5b) were significant and seven out of twelve hypotheses (H1a, H2b, H3a, H4a, H5a, H6a, H6b) did not have the expected sign.

The values were significant and the signs were positive for the following hypotheses: Model 1 (H3a, H3b, H4b, H6a); Model 2 (H2a, H2b, H3a, H3b). The values were significant, but the expected sign was different: Model 1 (H1a, H3a, H6a); Model 2 (H5a). In case the values are significant and the signs are positive, the model provides the empirical support of hypothesized effects. Therefore, these hypotheses were supported in our model. If the values are insignificant and the signs are contrary to the assumed effects, the hypotheses are not supported. In our case the values are insignificant and the signs are contrary to the assumed effects for the following hypotheses: Model 1 (H4a), Model 2 (H1a, H4a, H6a, H6b). Therefore, these hypotheses were not supported in our model. The results of hypotheses testing are presented in Table 14.

Table 14. Information about the results of hypotheses testing[15]

Hypotheses	Expected sign	Obtained sign	Supported/Not supported
Model 1			
H1a	+	-	not supported
H1b	-	-	supported
H2a	+	+	*supported*
H2b	-	-	*supported*
H3a	-	+	not supported
H3b	+	+	supported
H4a	-	+	*not supported*
H4b	+	+	supported
H5a	+	+	*supported*
H5b	-	-	*supported*
H6a	-	+	not supported
H6b	+	+	*supported*
Model 2			
H1a	+	-	*not supported*
H1b	-	-	*supported*
H2a	+	+	supported
H2b	-	+	not supported
H3a	-	+	not supported
H3b	+	+	supported
H4a	-	+	*not supported*
H4b	+	+	*supported*
H5a	+	-	not supported
H5b	-	-	supported
H6a	-	+	*not supported*
H6b	+	-	*not supported*

Source: own accomplishment

Therefore, we can conclude that six out of twelve hypotheses in each model (1 and 2) were rejected because of their low statistical significance. The remaining hypotheses which

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[15] Hypotheses which turned insignificant according to the results of t-statistics and, therefore, should not be considered as reliable, are marked *italic*.

showed a significant value were checked for their sign. In Model 1 three hypotheses showed a significant value and were supported (H1b, H3b, H4b) and three showed a significant value and were not supported (H1a, H3a, H6a). In Model 2 three hypotheses showed a significant value and were supported (H2a, H3b, H5b) and three showed a significant value and were not supported (H2b, H3a, H5a).

Since some hypotheses turned out to be statistically insignificant, we had to reject them according to the rules of hypotheses testing. However, there is a lot of disagreement found in the literature around the issue of significance. Statistical hypotheses testing has received a lot of criticism in recent years. Cohen (1994) criticized this technique by saying that it "does not tell us what we want to know" and "out of desperation, we nevertheless believe that it does". It is also stated that this term is often misused leading to the misunderstandings in the meaning of theoretical or practical significance. Many authors state that this term is rather misleading, since it implies that a research result should be considered important because it is statistically significant, or that it is not important because it is not statistically significant. For example, Gall (2001) states: "My claim, then, is that tests of statistical significance say virtually nothing about the importance of a research result." Therefore, we think that it might be more important to consider which practical importance the research findings have. Obtaining statistically insignificant results could also be connected with insufficient sample size. Therefore, whether the statistical significance really has the subjective importance remains unclear. The discussion of the results of the model assessment is presented in the following section.

7.2.4 Discussion

Coercive influence strategies
Despite our expectation that coercive influence strategies should have the positive effect on coordination and alignment of actions due to their commanding nature it turned out that in Model 1 coercive influence strategies had negative effects both on coordination and cooperation. The strength of the effect was approximately equal with a little stronger effect on coordination. The results of the model calculation for Model 2 have the same signs – negative. Though the strength of the effects is a slightly different from the results achieved for suppliers' sample. The effect of coercive influence strategies on cooperation and coordination is also negative though a little weaker than in the suppliers' sample. Therefore, Hypotheses H1a and H1b were not supported in both models. The discussed findings of the model assessment compared with hypothesized effects are presented in Figure 18.

The possible explanation for the negative effects of coercive influence strategies on coordination may be the fact that the targets of influence are not sufficiently motivated in acting according to the recommendations of the influencing party and, thus, lose interest in the relationship. Since punished weaker business partners must bear the costs of punishment, the use of coercive influence strategies can lead to impairment of judgment. In that case supply chain actors become too frustrated and angry to care about responsibility for individual or moral choices. Besides, frequent use of coercive influence strategies could create tension and frustration, because business operations are disrupted and the decision autonomy of the weaker supply chain actors is constrained, which may result in disagreements and conflict. Probably the main reason for the negative effects of this kind of influence strategies could be the fact that monetary payoff of the expected gains from a relationship is too low in comparison to the monetary losses of the recipients, which results in the destructive effects and aversion from the side of the targets of influence.

Figure 18. Findings of model assessment for coercive influence strategies (Hypotheses H1a and H1b)
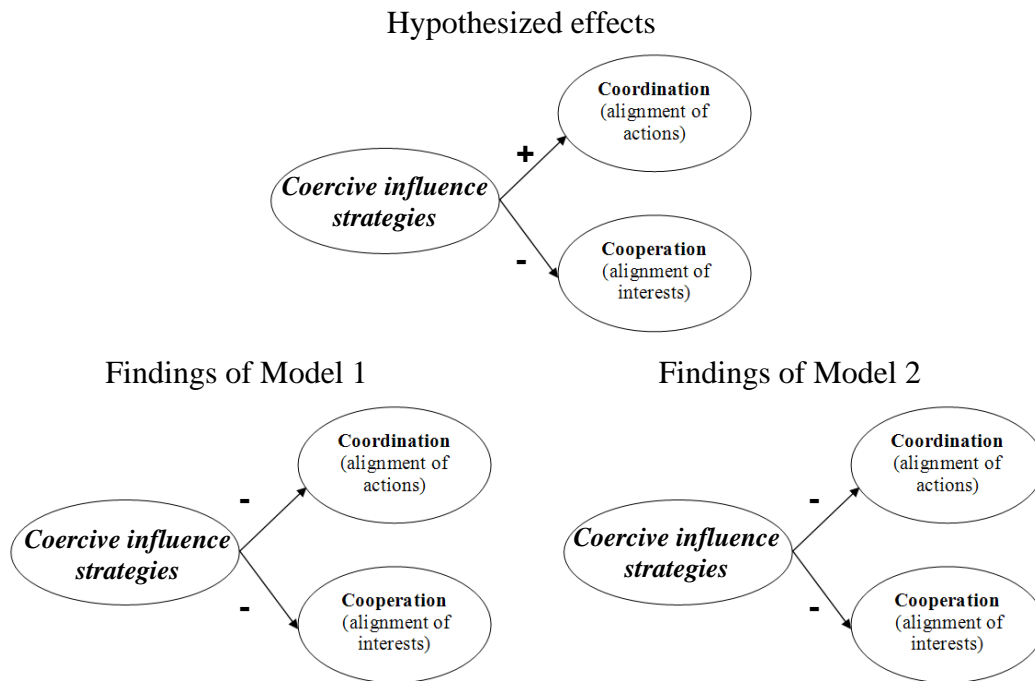
Hypothesized effects

Findings of Model 1   Findings of Model 2

Source: own accomplishment

The comparison of the main results of literature review, content analyses and model assessment allows us to conclude that the theoretical assumptions regarding the effects of coercive influence strategies on coordination and cooperation were supported only for cooperation (Figure 18, Table 15).

Table 15. Interconnection of results of literature review, content analyses and model assessment with respect to coercive influence strategies

Main results of literature review		Coercive influence strategies are considered to be negatively related to cooperation and positively to coordination and development of stable relationships because they are the most readily available means for shaping the behaviour. However, despite short-term benefits exercising coercive influence strategies might reduce success in the long-term.
Main results of content analysis	**Telephone Survey A**	Coercive influence strategies could often have a hidden character and are considered to be not very effective because they show that the company has aggressive intentions, do not allow to reach the goal of having long-term relationships due to destructive effects on the motivation. They could be effective in the short-run, but do not solve the problem at its root.
	Telephone Survey B	Coercive influence strategies generally tend to be the least often used kind of influence strategies, though they are viewed in a positive light due to the fact that they allow competitive selection of partners and could be efficient in relationships with partners of commodity groups of non-strategic character.
Main results of model assessment		Coercive influence strategies have negative effects both on coordination and cooperation in relationships with suppliers and with buyers. Therefore, managers are not advised to use this kind of influence strategies due to their general negative effects on SCM.

Source: own accomplishment

In spite of our assumption that coercive influence strategies can be seen as bringing order and discipline into the relationship as well as be effective in changing behaviour, the effects of coercive influence strategies turned out to be negative on both coordination and cooperation. The findings of the content analyses indicate that coercive influence strategies are the least often used kind of influence strategies, though they are viewed in a positive light. Also, the content analyses confirmed the fact that coercive influence strategies are viewed to be effective only in the short-run, but do not solve the problem at its root, as was stated in the literature. According to our general impression the respondents of telephone surveys A and B were reluctant to speak about the use of coercive influence strategies. We assume that this subject could be quite painful to discuss about especially due to the fact that most of the interviewed experts gave their answers from the viewpoint of a focal company. The findings of the content analysis of Telephone Survey A already gave us some idea that this kind of influence strategies has a hidden character. Therefore, coercive influence strategies could be used in reality more often than the respondents were ready to admit.

In spite of our argumentation and expectation that coercive influence strategies play a positive role as a coordination mechanism in the supply chain, they have indeed negative effects. The negative signs of correlation coefficients tell us that by increasing the use of coercive influence strategies the degree of fulfilment of tasks of coordination as well as cooperation will decrease. Therefore, we would not advise managers to apply this kind of influence strategies, since they promise only negative effect.

Reward influence strategies

According to our assumptions reward influence strategies should have a negative effect on cooperation and a positive effect on coordination. We motivated this statement by the fact that reward influence strategies are similar to coercive influence strategies in their nature. It is based on the principles of extrinsic motivation and does not contribute to the long-term intrinsic motivation for the alignment of interests of supply chain participants. In our sample this seems to be the case. Though the effect on coordination is relatively weak in Model 1, it is positive and the increase of the use of reward influence strategies will cause the improvement of coordination in the supply chain. The effect of reward influence strategies on cooperation turned out to be negative in Model 1, as we expected. Therefore, our assumptions about the hypothesized effects of reward influence strategies on coordination as well as on cooperation were correct according to the findings of Model 1. Reward influence strategies in Model 2 turned out to have positive effect on coordination and cooperation. The effect on coordination is stronger than on cooperation. We supposed that reward influence strategies would have a negative effect on cooperation since it has no effect on extrinsic motivation of the buyers. But in the case with buyers reward influence strategies have a positive effect, which in comparison to the suppliers' sample could be attributed to the nature of the relationships of processors with buyers.

Therefore, Hypothesis H2a was supported in both samples, whereas Hypothesis H2b was supported only in Model 1. The discussed findings of the model assessment compared with hypothesized effects are presented in Figure 19.

Figure 19. Findings of model assessment for reward influence strategies (Hypotheses H2a and H2b)
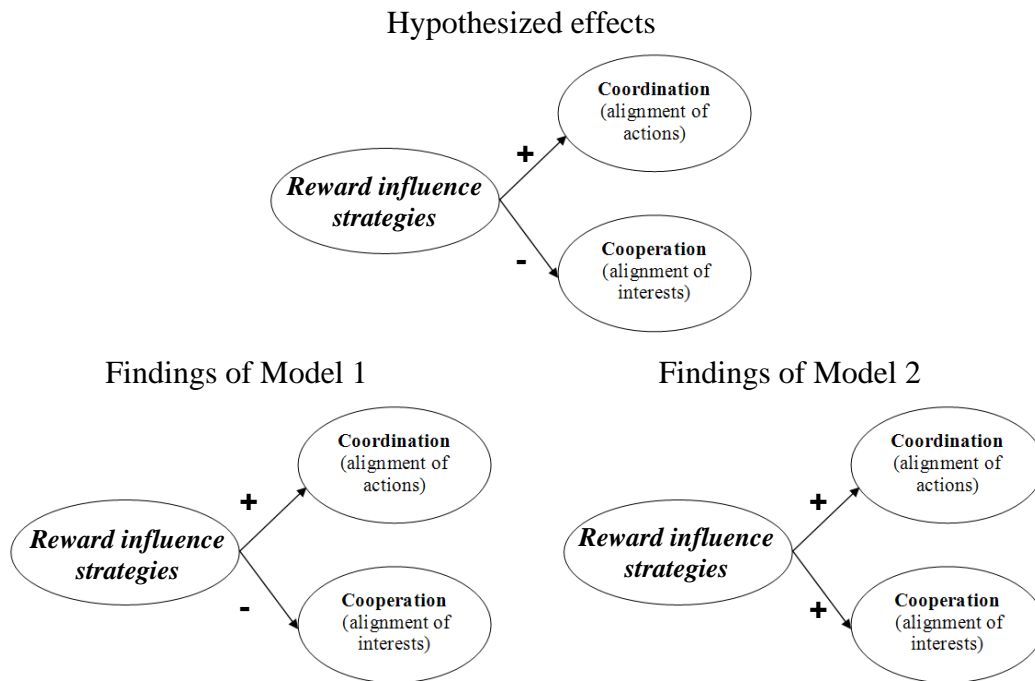
Hypothesized effects

Findings of Model 1   Findings of Model 2

Source: own accomplishment

The comparison of the main results of literature review, content analyses and model assessment allows us to conclude that the theoretical assumptions regarding the effects of reward influence strategies on coordination and cooperation were supported for the suppliers' sample (Figure 19, Table 16).

Table 16. Interconnection of results of literature review, content analyses and model assessment with respect to reward influence strategies

Main results of literature review		Reward influence strategies have a positive effect on coordination, since both rewards and punishments provoke rapid changes in behaviour. However, the overly frequent use of reward influence strategies is likely to damage relational norms and cooperation.
Main results of content analysis	**Telephone Survey A**	People are motivated by a full purse and financial stimulation. Reward influence strategies such as investments into the production and cooling equipment and financial assistance to producers in the form of credit or leasing are successful for creating long-term relationships with suppliers.
	Telephone Survey B	The use of reward influence strategies is considered to be very attractive. This kind of influence strategies was the second most widely used (after informational influence strategies). The use of reward influence strategies depends on the availability of resources of the influencing company.
Main results of model assessment		The effect of reward influence strategies on coordination is positive and negative on cooperation in the suppliers' sample. The effects on coordination and cooperation in the buyers' sample are positive. It can be expected that the use of reward influence strategies would generally cause the improvement of coordination in supply chains and networks.

Source: own accomplishment

However, the results of the model assessment for the buyers' sample did not support our hypothesized effects on cooperation. The effects of reward influence strategies on cooperation in Model 2 were different from the results of Model 1 and the hypothesized effects. In this case they had a positive effect on cooperation against our assumptions about the extrinsic motivation of this kind of influence strategies. It turned out that in the buyers' sample the possibility of exchanging rewards enforced cooperation. Thus, there seems to be a strong connection between reward influence strategies and buyers' willingness to cooperate, since reward influence strategies initiate the collaborative effort. The use of reward influence strategies, which decreases the monetary payoff of the focal company and increases the monetary payoff of the target of influence, turned out to foster cooperation with buyers. We tend to believe that the results of Model 1 are closer to the reality in spite of its insignificance, since referent influence strategies articulate an inspirational vision affecting the target's motivation and willingness to cooperate (of course only under the condition that the referent influence strategies are derived from a positive image or reputation).

Generally we observed that the use of this kind of influence strategies provokes changes in behaviour and motivates the target of influence to act according to the will of the influencing party. The findings of the content analyses indicate that this kind of influence strategies was the second most widely used (after informational influence strategies), which allows us to conclude that reward influence strategies are very well known and attractive for both the influencing party and the target of influence. Our assumptions that reward influence strategies result in net benefits for both parties were true. Apparently this is due to the fact that the utility of the focal company derived from the achieved compliance is greater than the cost for providing the reward. We also assumed that reward influence strategies may have an element of coercion in them and might, therefore, have the reverse effect on relationships that coercive influence strategies have. When a focal actor uses reward or coercive influence strategies, it provides extrinsic motivation for the target's commitment. The target is, therefore, driven to comply with the focal actor's requirements in order to achieve favourable outcomes. Therefore, our assumption that reward influence strategies are perceived as having an element of coercion in them, but only in the reverse manner, was correct.

Nevertheless, we think that rewards should be applied in the proper way in order to have a positive effect. Therefore, great caution should be taken when giving rewards, since they might have a reverse or no effect if not adjusted to the expectations of the receiver. The rewards should indicate that they are deserved and announced in advance. In this case rewards might represent the level of rewards the firm expects to receive from a business relationship. If the expected rewards turn out to be below the level of deserved rewards, the target could attempt to search for other more attractive alternatives. If deserved rewards are not repeated, the relationship could probably end quickly. One could also assume that the receiver of the reward may perceive it as a form of bribery or insult, which could have negative effects.

This kind of influence strategy can be considered to be a powerful motivation device for improving the alignment of interests and, thus, cooperation, in the supply chain network. Therefore, it is highly recommended to apply reward influence strategies to improve coordination and cooperation in relationships with buyers. However, in relationships with suppliers the effect of reward influence strategies might be negative. Still, this kind of influence strategy could be used in any case to foster the alignment of actions and coordinate the activities of weaker supply chain actors.

Expert influence strategies

Expert influence strategies have identical effects in both samples (Models 1 and 2) and both are positive on coordination and cooperation. We assumed that the effect of expert influence strategies on coordination should be negative, since they are relatively weak with respect to the extrinsic motivation and coordination of activities. However, despite our assumptions that expert influence strategies are more suitable for the achievement of cooperation among supply chain actors and alignment of interests, they also showed a positive effect on coordination. The positive effect of expert influence strategies on cooperation corresponds with the assumed hypothesis in both samples (Models 1 and 2). The effect in buyers' sample is a little weaker than in the suppliers' sample, but positive. Therefore, hypothesis H3a was not supported in both models. Hypothesis H3b was supported in both models. The discussed findings of the model assessment compared with hypothesized effects are presented in Figure 20.

Figure 20. Findings of model assessment for expert influence strategies (Hypotheses H3a and H3b)
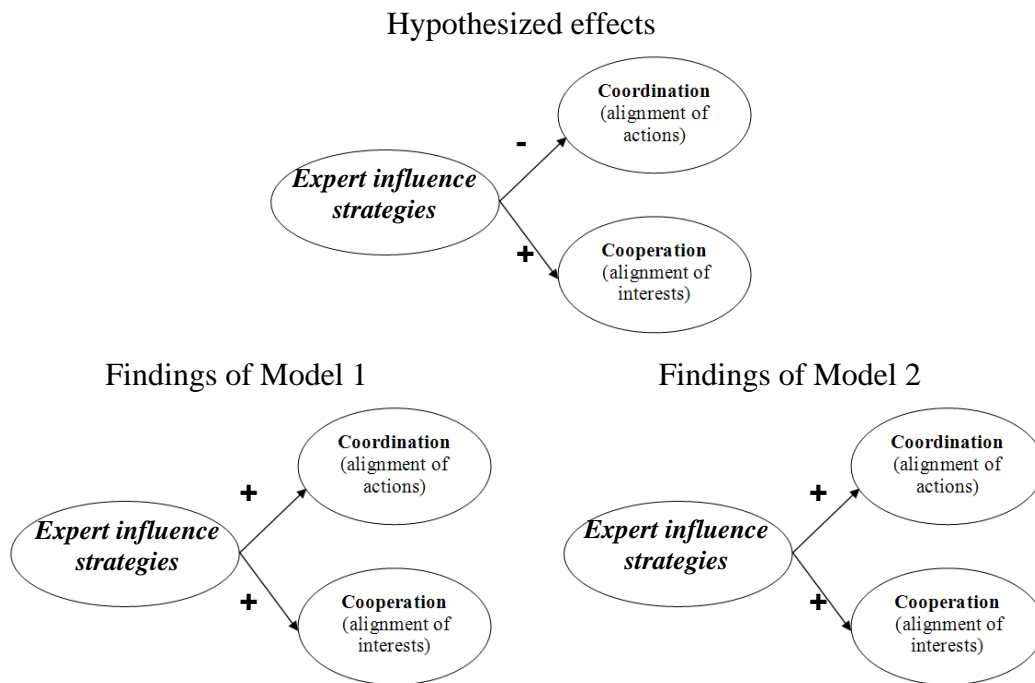
Source: own accomplishment

The comparison of the main results of the literature review, content analyses and model assessment allows us to conclude that the theoretical assumptions regarding the effects of expert influence strategies on coordination and cooperation were supported only for cooperation (Figure 20, Table 17).

The use of expert influence strategies turned out to have a positive effect on coordination as well as on cooperation although it was considered less flexible and unrelated to specific performance from the theoretical point of view. Besides, one has to admit that these effects were relatively strong in both samples.

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Table 17. Interconnection of results of literature review, content analyses and model assessment with respect to expert influence strategies

Main results of literature review		Expert influence strategies are less effective than coercive and reward influence strategies because they are less flexible and unrelated to specific performance. However, the use of expert influence strategies might contribute to the positive development of cooperation when the objectives of the target match those of the influencing party.
Main results of content analysis	Telephone Survey A	Expert influence strategies such as educational or qualification activities are used for Russian suppliers who are motivated and interested in the long-term cooperation. Russian partners need to be accompanied at all steps of the projects; thus, consulting services should be project-bound and constant.
	Telephone Survey B	Russian suppliers confess their own lack of experience and recognize the expert knowledge of foreign retailers and manufacturers operating in Russia. One of the remarkable things about the use of expert influence strategies is their relatively seldom use. They are used just as seldom as legitimate strategies and a little more often than coercive influence strategies.
Main results of model assessment		Expert influence strategies have nearly identically strong effects in both samples and both are positive on coordination and cooperation. The use of reward influence strategies would cause the improvement of coordination and cooperation in the supply chain in both samples.

Source: own accomplishment

The findings of the content analyses indicate also that expert influence strategies are relatively seldom applied. It could be due to the fact that they are not very well known compared to other strategies. Therefore, one should try to use this kind of influence strategies as much as possible. For example, offering various technical support measures, such as training of employees at company's headquarters could stimulate both cooperation and coordination in the supply chain. Branded manufacturers, especially those who are specialized in high-quality, tailored products, have the reputation of establishing close and long-term technological and organizational cooperation with their suppliers. An example of Campina in Russia leads us to believe that offering training and education is a focal company's long term investment in SCM. As Campina's technical-assistance team provided training to farmers in order to improve animal husbandry and raise production quality to international standards, it achieved suppliers' compliance with necessary quality standards. Support of ongoing supplier development through technical assistance and training in e.g. raw material procurement, credit support and bank intermediation, implementation of quality and environment management programs and statistical control processes, cost analysis, financial regulations, and cash-flow management will be positively related to coordination.

When managers have specialized knowledge, they have the potential to use expert influence strategies. The way expert influence strategies are exercised is critical in forming the perceptions of the recipient. Expert advice given in an authoritative manner will probably have a negative effect. Also withholding expertise in time of need could be perceived negatively. Therefore, one should be careful of the way one exercises the expert influence strategies. Taking into account the discussed issues, the use of expert influence strategies is highly advisable in both kinds of relationships (with suppliers and with buyers), since they have a positive influence on both coordination and cooperation.
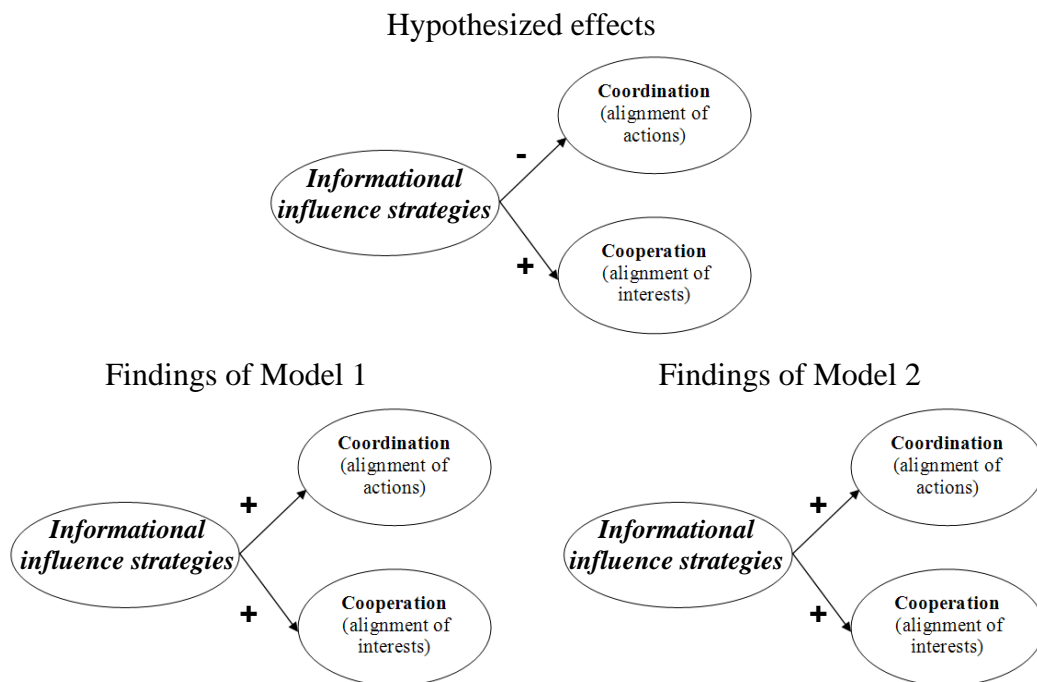
Informational influence strategies

The effects of informational influence strategies are identical in both models and are similar to the effects of expert influence strategies, though the strength of the effect of informational influence strategies on cooperation is much weaker than those of expert influence strategies. We assumed that the effect of informational influence strategies on coordination will be negative, since they do not provide extrinsic motivation or foster coordination of activities. Despite our assumptions informational influence strategies showed a positive effect on both coordination and cooperation in both samples (Models 1 and 2).

Comparing the effects between the two samples shows that the strength of the effects of informational influence strategies on coordination in Model 2 is a little stronger than in Model 1, but still positive in both cases. However, the effect of informational influence strategies on cooperation in Model 2 is much weaker (0.048864) than in Model 1 (0.257051). One could hypothesize about the reasons of different strengths of effects, but the most important fact is that the effects on coordination and cooperation in both cases are positive.

Therefore, hypothesis H4a was not supported, whereas hypothesis H4b was supported in both models. The discussed findings of the model assessment compared with hypothesized effects are presented in Figure 21.

Figure 21. Findings of model assessment for informational influence strategies (Hypotheses H4a and H4b)

Source: own accomplishment

The comparison of the main results of the literature review, content analyses and model assessment allows us to conclude that the theoretical assumptions regarding the effects of informational influence strategies on coordination and cooperation were supported only for cooperation (Figure 21, Table 18). The content analyses showed that informational influence strategies are the most often used and the most popular among the respondents and are seen to be effective for maintaining harmonious relationships and successful for creating long-term partnerships.

Table 18. Interconnection of results of literature review, content analyses and model assessment with respect to informational influence strategies

|		
Main results of literature review		Informational influence strategies have a negative effect on achieving compliance with the requirements of the influencing party because they are unfocused and lack specificity as to what needs to be done. Information influence strategies might have a positive effect on cooperation because they promote relationalism between parties.
Main results of content analysis	**Telephone Survey A**	Informational influence strategies such as business talks, collaborative discussions, persuasive arguments, technical assistance programs, transfer of know-how and innovative technologies are effective for maintaining harmonious relationships and successful for creating long-term partnerships.
	Telephone Survey B	Informational influence strategies are the most often used and the most popular among the respondents kind of influence strategies. The number of respondents using these strategies with their suppliers was higher than with their buyers.
Main results of model assessment		Informational influence strategies have positive effects on both coordination and cooperation in both samples, though the strength of the effect of informational influence strategies is weaker than that of the expert influence strategies. Presumably information influences the target indirectly and affects not only the intentions but also behaviour.

Source: own accomplishment

Our assumptions with respect to the effect on coordination were based on the following arguments. We considered informational influence strategies to be unfocused with respect to coordination of activities. Even though one might believe that information might serve as a mechanism to improve coordination, the target of influence might not necessarily respond positively to the coordination attempts of the focal actor due to the absence of formulated tasks. This strategy can be viewed as a subtle form of influence through which the target is not requested to act in a certain manner, but should draw own conclusions about what to do. Therefore, informational influence strategy lacks specificity about what needs to be done. The specific action that the target needs to perform remains undefined. Also, the target of influence could be plagued by the fear of reduction of its economic benefits. However, it turned out that informational influence strategies had a positive effect on coordination. Sending information apparently influences the target, though presumably indirectly; since it may circumscribe the range of behaviours the other firm considers and, thus, affects its behaviour. Thus, a retailer may be able to affect the behaviour of other firms to the extent that it can coordinate the processes through the information concerning consumer purchasing behaviour, which the retailer derives directly from its experience of consumer shopping.

Being a kind of communication, informational influence strategies could have a positive effect on cooperation, since the ability to communicate (even without commitment) is typically found to foster cooperation. Another aspect worth mentioning when explaining the positive effect of informational influence strategies on cooperation is the fact that possession of new and up-to-date information provides the focal company with confidence in negotiating and, thus, increases its persuasive capabilities, which, in turn, may increase cooperation. In both samples of our survey the informational influence strategies affected cooperation positively, as expected. Therefore, it is highly advisable to use informational influence strategies in relationships with suppliers and with buyers due to their positive effects on both coordination and cooperation.

Legitimate influence strategies

According to the unsurprising findings of Model 1, the effects of legitimate influence strategies turned out to be positive for coordination and negative for cooperation. One must admit though, that in spite of the positive sign of the effect on coordination, the strength of this effect is unimaginably weak (0.007748). The effect of legitimate influence strategies in relationships with buyers is negative on both coordination and cooperation with approximately equal strength. In the case of suppliers the effect was slightly positive on coordination, however in the case of buyers we observe a clearly negative effect. The negative sign of the correlation coefficient indicates that the increase of legitimate influence strategies will lead to the decrease in coordination in Model 2. The findings of the model compared with hypothesized effects are presented in Figure 22.

Figure 22. Findings of model assessment for legitimate influence strategies (Hypotheses H5a and H5b)
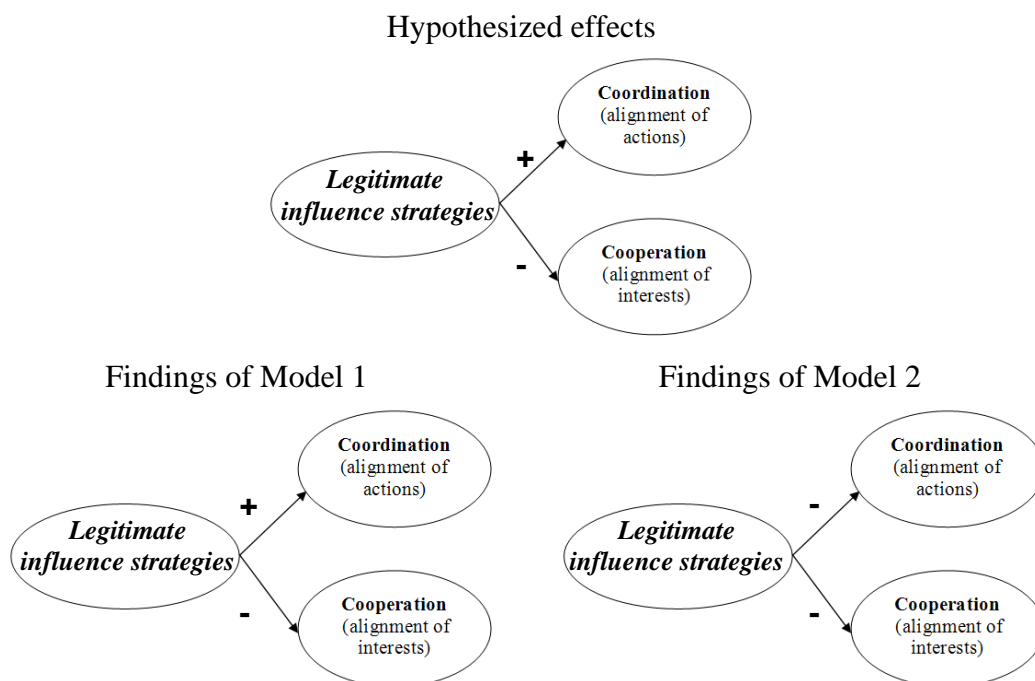
Source: own accomplishment

We tend to believe that the effects of legitimate influence strategies on coordination and on cooperation are negative in general, no matter which sample we analyze. Even though the effect on coordination was positive in Model 1, we are more inclined to rely on results of Model 2 for several reasons. The small positive effect on coordination in Model 1 tells us almost nothing, since it would probably not be helpful in significantly improving the level of coordination in a supply chain network. Therefore, Hypothesis H5a was supported only in Model 1, whereas Hypothesis H5b was supported in both models.

The comparison of the main results of the literature review, content analyses and model assessment allows us to conclude that the theoretical assumptions regarding the effects of legitimate influence strategies on coordination and cooperation were supported only for suppliers' sample (Figure 22, Table 19).

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Table 19. Interconnection of results of literature review, content analyses and model assessment with respect to legitimate influence strategies

Main results of literature review		Legitimate influence strategies might have a negative effect on cooperation because they are perceived by the target as a form of a dictatorship. On the other hand, regulations and sanctions based on legal contractual agreements might be perceived as a punishment and, thus, play an important role in encouraging changes in behaviour.
Main results of content analysis	Telephone Survey A	Due to the mentality and cultural heritage in Russia it is not recommended to rely on promises made in an oral or informal way. It is better to write all business agreements down in order to make sure that the contractual arrangements are fulfilled.
	Telephone Survey B	Business relationships generally tend to be based more on written contracts than on informal agreements. Referring to legal agreements and obligations, using short and long term contracts was preferred among other legitimate influence strategies. Informal legitimate influence strategies are almost not used.
Main results of model assessment		The effects of legitimate influence strategies on coordination and on cooperation are generally to be interpreted as negative. Though the effect on coordination was positive in suppliers' sample, the described positive effect was very weak. Therefore, similar to coercive influence strategies, this kind of influence strategies would have mostly negative effect on SCM.

Source: own accomplishment

The content analyses showed that informal legitimate influence strategies are less preferred than formal and written agreements and contractual arrangements. It could be due to the fact that the use of informal methods requires a certain level of trust, which could be lacking in Russia.

We view legitimate influence strategies, due to their formal nature and clear legal basis, as one of the mechanisms which can be applied to the governance and coordination of suppliers. Legitimate influence strategies generally could be thought to reduce uncertainty about behaviours and outcomes by providing formal rules and procedures to govern the relationship. The target of influence has to take into account the legal and economic consequences of violating explicit written contracts. Since the legitimate influence strategies originate from a given position or existing norms or laws, the supplier may take the protection offered by a legitimized powerful position of the retailer for an additional advantage. This could imply the positive result of this kind of influence strategies. Since legitimate influence strategies present clear guidelines, specify the rights and obligations of both parties and refer to the cost of violating norms or statutes for a target, we assumed that they would improve coordination.

However, in some cases the target of influence may view legitimate influence strategies as vague with respect to the necessity of compliance and may resist. When the suppliers perceive the cost of compliance as excessive, they may decide to dissolve the relationship even though the focal actor wins its legal point. Besides, references to legal contracts or informal agreements may appear insulting to the target and imply unfavourable relations in the future. Hence, the use of legitimate influence strategies could also increase conflict and result in legal costs for both parties. In addition to the mentioned aspects one must consider the cultural and country-specific legal environment and formed attitudes of supply chain actors towards legitimacy in general. It could be that they have a negative reaction to the use of legitimacy in general and resist it by all means. The use of legitimate influence strategies might have no effect or have a negative effect in this specific environment.

Therefore, similar to the effect of coercive influence strategies, this kind of influence strategies mostly has a negative effect on SCM. For this reason, we would not recommend using this kind of influence strategies for these purposes.

Referent influence strategies
Referent influence strategies turned out to have a positive effect on both coordination and cooperation in Model 1. We assumed that due to the insufficient extrinsic motivation for actions of supply chain members, this kind of influence strategies may only be used for indirect stimulation of members. Surprisingly enough, it has an even more positive effect on coordination than on cooperation. The positive signs of correlation coefficients indicate that the increase of the use of this kind of influence strategies will only improve the cooperation and coordination in the supply chain considerably. This kind of influence strategies turned out to be powerful enough to motivate not only the interests but also the activities and actions of supply chain members in the Russian agri-food business.

In Model 2 referent influence strategies turned out to have a positive effect on coordination just like in the case with suppliers. The strength of the effect is a little weaker than in the suppliers' sample, but it is still positive. As for the effect referent influence strategies have on cooperation in Model 2 we observe a slightly negative effect. Therefore, Hypothesis H6a was not supported neither in Model 1 nor in Model 2. Hypothesis H6b was supported only in Model 1. The discussed findings of the model assessment compared with hypothesized effects are presented in Figure 23.

Figure 23. Findings of model assessment for referent influence strategies (Hypotheses H6a and H6b)
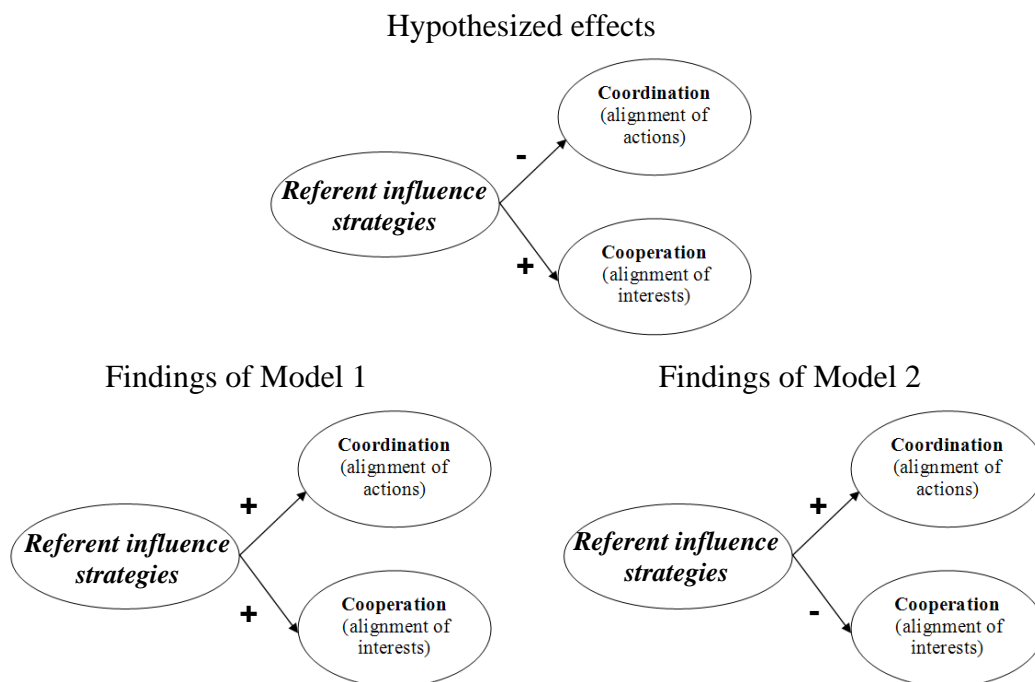
Source: own accomplishment

The comparison of the main results of the literature review, content analyses and model assessment allows us to conclude that the theoretical assumptions regarding the effects of referent influence strategies on coordination and cooperation were supported only for cooperation in suppliers' sample (Figure 23, Table 20).

Table 20. Interconnection of results of literature review, content analyses and model assessment with respect to referent influence strategies

Main results of literature review		Referent influence strategies are expected to foster the development of cooperation due to positive image and reputation of the influencing party. However, they might not be sufficient to motivate the target to the implementation of tasks due to the missing specificity about the desired behaviour.
Main results of content analysis	Telephone Survey A	Referent influence strategies such as emotional appeals, identification with the company, approval or disapproval of partners' actions is seen to be not very efficient in the Russian agri-food business due to traditional perceptions and cultural heritage.
	Telephone Survey B	Referent influence strategies are the third most often used after informational and reward influence strategies. Strategies indicating the positive effects of the desired course of actions were preferred to strategies requesting the target to accept ideas without explaining the expected consequences.
Main results of model assessment		The effects of referent influence strategies on coordination and cooperation are generally to be interpreted as positive in spite of the weak negative effect on cooperation in the buyers' sample. This kind of influence strategies is efficient in motivating both interests and actions of supply chain members.

Source: own accomplishment

The content analyses showed that referent influence strategies are the third most often used after informational and reward influence strategies and that strategies specifying the outcomes of the action are more preferred than vague hints and approval or disapproval of the target's actions or intentions.

According to our assumptions, referent influence strategies could be seen as a mechanism of infusing targets with moral purpose and commitment rather than affecting the task environment, since they do not offer material incentives and the threat of punishment. Referent influence strategies are designed in such a way as to match the target's intangible, subconscious needs for status, security and attention with the goal to achieve compliance on a specific issue. Since referent influence strategies stem from the image and reputation, it is evident that the strength of the motivation to comply with this kind of influence strategies would be based on the strength of the image and attractiveness of the relationship.

In general referent influence strategies could be viewed to have a fundamental impact on the followers' perceptions and beliefs and do not contain an explicit description of tasks. For these reasons we assumed that the behavioural part might not be affected. However, our assumptions were wrong, since referent influence strategies turned out to have a positive effect on coordination in both models despite the lack of specificity of the desired behaviour of the target. In Model 1 referent influence strategies had a positive effect on cooperation, which was not the case in Model 2.

We still tend to believe that the effect of referent influence strategies on cooperation is generally positive in spite of the findings of Model 2. Our opinion is based on the fact that the small negative effect on cooperation (-0.090178) in Model 2 tells us almost nothing, since the findings of Model 1 indicate the positive effect on cooperation. Therefore, the effect could still be possible if we conducted an analysis with a different sample. Taking into account the discussed issues, the use of referent influence strategies is highly advisable (especially in relationships with suppliers), since they have positive influence on both coordination and cooperation.

7.3 Summary of Chapter 7

After critically reviewing the literature on SEM we decided to test our theoretical model with PLS path modeling. There are some major reasons for this. First, the PLS path modeling algorithm allows both reflective and formative ways of modeling to be used without causing any problems. Second, PLS can be used to estimate models for fairly small samples. Third, PLS can cope with complex models with a high number of latent and manifest constructs in relation to the number of observations without causing estimation problems. Fourth, PLS path modeling uses few or no distributional requirements. Since we had two different samples (answers of experts with respect to their relationships with suppliers and with buyers) we were able to run our model two times and received two different models. Model 1 refers to Sample 1 (answers of experts with respect to their relationships with suppliers), whereas Model 2 refers to Sample 2 (answers of experts with respect to their relationships with buyers) accordingly.

In spite of our expectation that coercive influence strategies should have a positive effect on coordination and alignment of actions due to its commanding nature, it turned out that in both samples coercive influence strategies had negative effects on both coordination and cooperation. Our research hypotheses regarding the effects of reward and legitimate influence strategies on coordination and cooperation were supported for the suppliers' sample. Expert and informational influence strategies have nearly identical effects in both samples and both are positive on coordination and cooperation. Referent influence strategies turned out to have a positive effect on both coordination and cooperation in Model 1. In Model 2 referent influence strategies turned out to have a positive effect on coordination just as in the case with suppliers. As for the effect referent influence strategies on cooperation in Model 2 we observe a slightly negative effect.

8. Contributions of the Thesis and Conclusions

In *Chapter 8* we elaborate on the contributions of the thesis and make some final conclusions about the conducted research. The main part of this chapter is on the contributions which we divided into the following groups: theoretical, empirical, methodological and managerial contributions. After describing the contributions of the thesis we express our opinion about possible limitations of research and share our thoughts about the outlook for future research. The last section of the chapter contains a summary and concluding remarks.

8.1 Theoretical Contributions

From a theoretical standpoint this research offers important insights into several theoretical concepts (such as networks, supply chains, supply chain networks, supply chain management, influence strategies) and represents a valuable contribution by developing the new model about the hypothesized effects of the use of influence strategies on SCM. This research is relevant in three ways.

First, it extends the body of knowledge on supply chain networks. The results of the critical literature review allowed us to clarify and purify the state of knowledge about this paradigm. We describe the main characteristics of supply chain networks which increases the understanding of how firms can manage relationships in such types of networks. We generally addressed the term "networks" in order to identify the main features of this concept as a form of interfirm cooperation and presented a review of typologies of interfirm networks. This step was necessary in order to indicate which types of networks are not at the focus of this thesis and which are. Since supply chain networks possess a focal firm that coordinates the whole network and exercises chain management practices to achieve the goals of the whole network, we also determined the role of focal actors in supply chain networks. Since focal companies were identified to be the core of the supply chain network and to be responsible for the management of the whole network, we built our theoretical model from the point of view of focal companies and addressed mainly this kind of companies in our empirical research.

Secondly, we brought clarification to the concept of SCM. We reviewed the existing chain management practices and the theoretical concepts of SCM. Based on the framework of Hanf and Dautzenberg (2006) we identified that the existing chain management practices aim to make the whole supply chain network act as a single entity. We worked out a concept of SCM taking into account the alignment of actions and the alignment of interests of the supply chain network members. As a result we presented a theoretical framework of problems and tasks of SCM based on the theoretical findings of the literature review. We identified the tasks of cooperation and coordination which we symbolically called: strategy transparency, strategic alignment, control of opportunism, general cooperativeness, operational transparency, synchronization of logistics processes, synchronization of decision-making processes, allocation of tasks. We also indicated the need to consider the concept of SCM in the view of two main areas: cooperation and coordination.

Thirdly, we reviewed the relevant literature on the concept of influence strategies and brought clarification to this vague and poorly conceptualized concept. The arsenal of literature we focused on included not only managerial and economic publications, but also material from the areas of sociology, psychology, philosophy, etc. We did a thorough review and conducted an e-mail survey of academic scholars all over the world working in the area of power and influence strategies. We examined different definitions and

classifications of power and influence strategies (coercive, reward, expert, legitimate, referent). Using this classification we conducted a literature overview on the effects of influence strategies and found that influence strategies have many multi-faceted effects on coordination and cooperation in supply chain relationships. Due to space limitations we only included selected findings in this thesis. Besides defining the theoretical concepts we looked at a number of empirical studies and made a review of existing operationalizations. In this thesis we clearly highlighted the existing gap in the literature, namely, the unclarified place and role of the concept of influence strategies in supply chains and supply chain networks (Figure 24). The study opens up a new perspective on the concepts of power and influence strategies as behavioural concepts for the purposes of managing supply chain networks.

Figure 24. Conceptual framework of the relevance of influence strategies for supply chain management
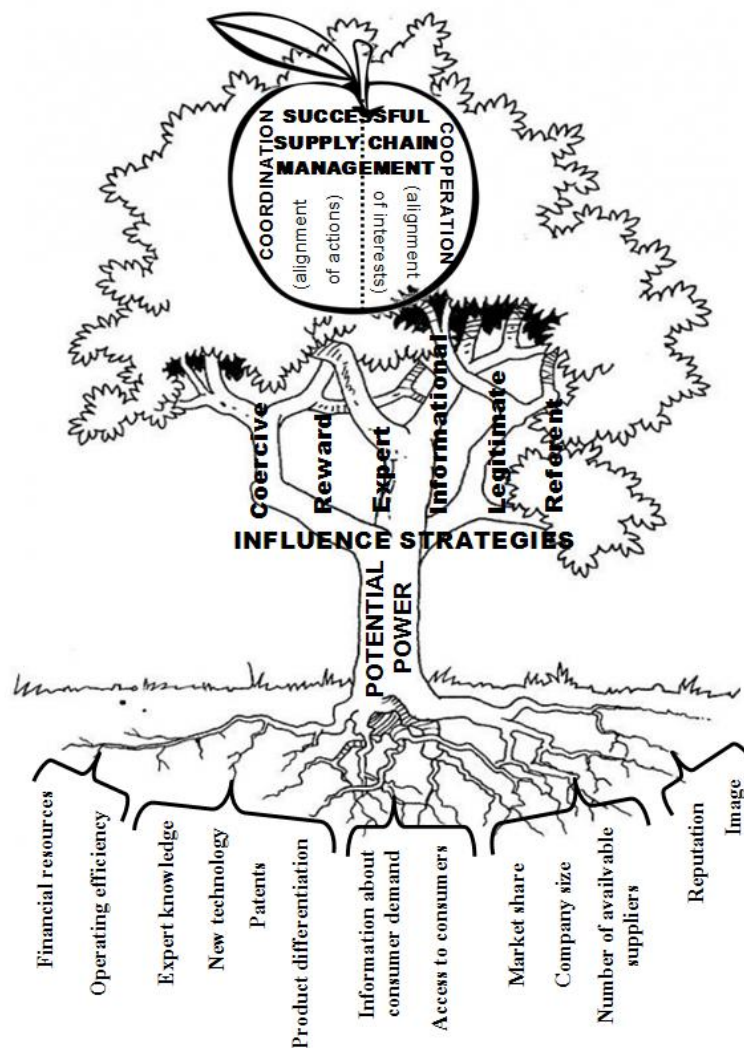
Source: own accomplishment

Fourthly, this study could be viewed as a pioneer work on investigating the role of influence strategies for SCM from the theoretical point of view and working out a theoretical model about this role. Since the positive role of power in supply chain networks is often overseen, where trust is dealt with as a mechanism for achieving

cooperation among firms and effective management, we worked out a new theoretical approach to the role of influence strategies in supply chain environment. Based on the analysis of the previous chapters on supply chain networks and their management as well as influence strategies and power we formulated a number of research assumptions and developed a theoretical model of using influence strategies for improving the tasks of coordination and cooperation within the concept of SCM. We hypothesized that influence strategies could be seen not only as intimidating and aggressive strategies, but highlighted the possible positive effects of these strategies. We used the classification of influence strategies of French and Raven (1959)/Raven and Kruglanski (1970) (coercive, reward, expert, informational, legitimate and referent influence strategies) from sociological point of view and applied it the setting of supply chain networks and SCM to developed hypotheses about the different effects of influence strategies in supply chain networks and discovered several facts which should be taken into account in the management of supply chain relationships especially for coordination and cooperation issues. This innovative approach could be seen as an extension to the existing body of theoretical studies and a contribution to the area of strategic management. Though this theoretical model could be debated on the applicability in real managerial situations, it still offers a new functional perspective of using influence strategies instead of trust (which is contrary to power very well researched nowadays) for improving SCM.

We hope that this theoretical model as well as the findings of the critical literature review on the mentioned concepts presented in this thesis will not only strengthen and enrich the theoretical foundations of SCM literature, but will also show a new direction in studying supplier-buyer relationships in social and behavioural contexts in the future.

8.2 Empirical and Methodological Contributions

Our study demonstrates the existence of power asymmetry with empirical evidence and the use of influence strategies for improving SCM in Russian agri-food supply chains. Therefore, besides the theoretical contributions our study has a number of empirical and methodological contributions.

First, in order to obtain quantitative evidence about the use of influence strategies for improving SCM in Russian agri-food supply chains we developed the operationalizations of variables for the concepts influence strategies and SCM (with distinct attention to coordination and cooperation issues). After summarizing and analyzing the existing operationalizations of variables for similar constructs proposed in the previous studies we discovered the necessity to develop our own measurement scales, since the constructs we needed were operationalized in a proper way.

Secondly, our study introduced Structural Equation Modeling (SEM) in the agribusiness management literature using the technique of Partial Least Squares (PLS) path modeling. Also, prior to applying the mentioned technique we studied this approach in great detail and analysed its advantages and disadvantages compared to the alternative methodologies (e.g., LISREL). By doing so, we extended the argumentation about this technique and clarified its role in assessing complicated models with multiple variables. We are sure that this work would also be useful to academic researchers who require information about how to choose the appropriate methodology within the available techniques of Structural Equation Modeling (SEM). We demonstrated the use of the chosen methodology in the agribusiness management setting on the example of Russia.

Thirdly, we presented empirical evidence about the relevance of the theoretical frameworks on SCM based on the framework of Hanf and Dautzenberg (2006) and of the

classification of influence strategies according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) in the Russian agri-food business. The theoretical concept of SCM by Hanf and Dautzenberg (2006) was tested in the empirical setting and was proved to be appropriate. The idea of viewing SCM through the lenses of coordination (alignment of actions) and cooperation (alignment of interests) was proven on the example of the Russian agri-food business. The classification of influence strategies by French and Raven (1959)/Raven and Kruglanski (1970) chosen among a number of other existing classifications was also tested on the example of the Russian agri-food business.

Fourthly, our study offers detailed empirical evidence about the characteristics of supplier-buyer relationships in Russian agri-food business on the basis of the conducted qualitative research. Only a limited number of studies (e.g., Roberts, 2005; Tarnovskaya et al., 2007) have presented empirical studies on supply chain structures and relationships among suppliers and buyers in Russia so far. Besides, the existing studies either put an emphasis on non-food business such as the study of Tarnovskaya et al. (2007) about the relationships of Russian suppliers with IKEA or the study by Roberts (2005) abut the problems of Auchan with Russian suppliers. However, our study offers up-to-date information about the existing situation and supply chain structures and relationships among suppliers and buyers in Russia with a focus on the agri-food sector.

Fifthly, we empirically showed the relevance and proved the existence of power asymmetry and the distribution of power along the supply chain in the Russian agri-food business. Though hypothetical suggestions about the existence and distribution of power along the supply chain in Russia were made by a number of authors (Popova and Sorenson, 2001; Kushch, 2005, etc.), none of these studies presented empirical evidence about these matters.

Sixthly, we gathered and analyzed quantitative information about the frequencies of use of influence strategies for improving SCM as well as about the level of satisfaction of managers with SCM in the Russian agri-food supply chains. These issues have implications for researchers and managers interested in the use of influence strategies for improving SCM in Russian agri-food supply chains. In the following section we continue to discuss the managerial contributions of our study and present a summary of managerial implications for using influence strategies in managing supplier-buyer relationships in Russian agri-food supply chains.

8.3 Managerial Contributions

Our study offers recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to coordination and cooperation issues and depending on the kind of partners (suppliers or buyers). In order to manage supply chain networks successfully the knowledge of different influence strategies is essential. The examples of such differentiation could also be found in the Russian agri-food sector. Depending on the origin of influence strategies they may have different effects on cooperation and coordination. They can destroy a cooperative relationship or help solve problems of coordination and aligning actions. The knowledge about these effects should be skillfully used for effective management of supply chain networks. In this section we work out a special ranking system for the use of influence strategies depending on their expected effect on coordination and cooperation.

Use of influences strategies for coordination
Expert influence strategies have the highest ranking among the other influence strategies for improving coordination (Figure 25).

Figure 25. Ranking of influence strategies according to the recommended use for coordination*
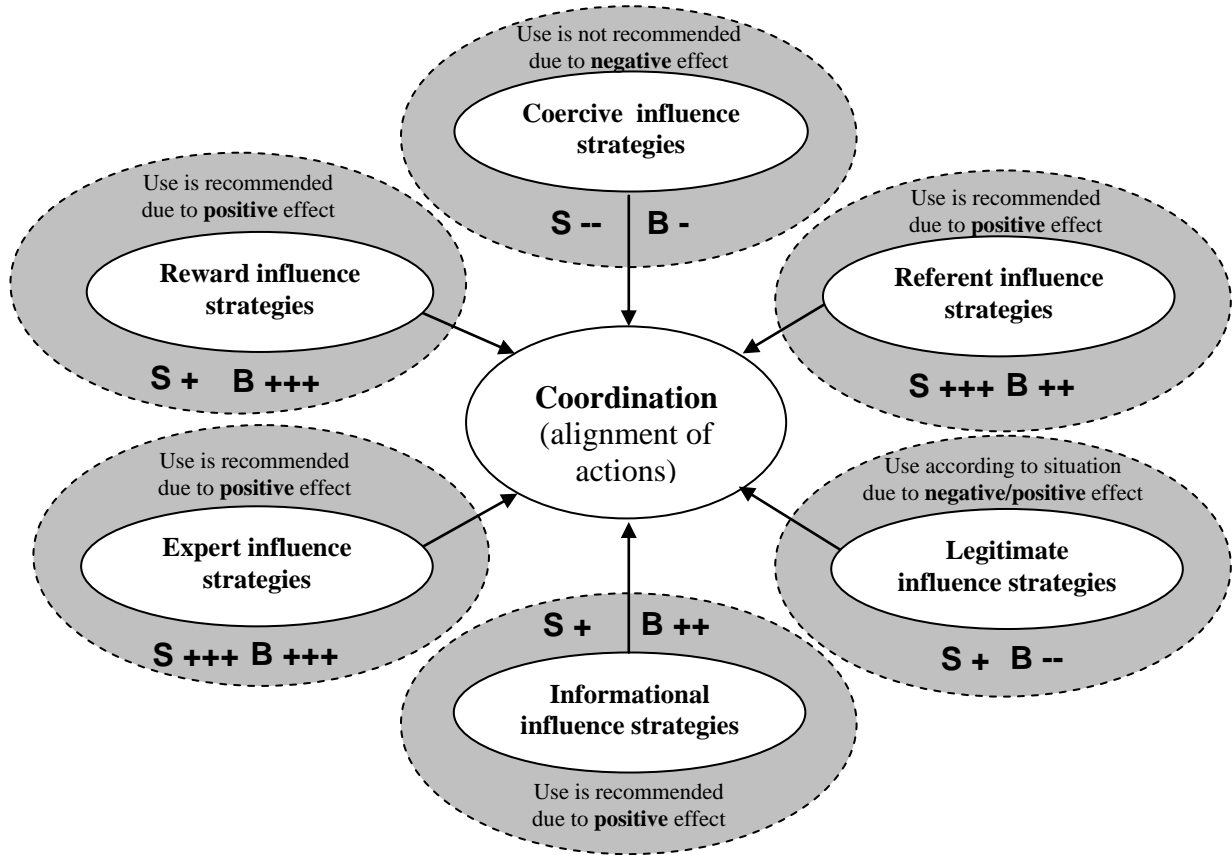
Ranking	S	B
1	Expert **+++**	Expert **+++**
2	Referent **+++**	Reward **+++**
3	Reward **+**	Informational **++**
4	Informational **+**	Referent **++**
5	Legitimate **+**	Coercive **-**
6	Coercive **--**	Legitimate **--**

*Abbreviations:
+++ strong positive effect (path coefficient>0.2)
++ moderate positive effect (0.2>path coefficient>0.1)
+ weak positive effect (path coefficient<0.1)
- weak negative effect (path coefficient<-0.1)
-- moderate negative effect (-0.2>path coefficient>-0.1)
--- strong negative effect (path coefficient>-0.2)
S in managing relationships with suppliers
B in managing relationships with buyers

Source: own accomplishment

No matter whether the manager wants to use this strategy in relationships with suppliers or with buyers – expert influence strategies is the best kind of strategies available. Therefore, we recommend using this kind of strategies to improve coordination as a first priority. However, the expert knowledge is not always available in a company. Therefore, one must think about what would the second best alternative would be for using it to improve coordination in a supply chain. As the results of the study show, referent and reward influence strategies also have a strongly positive effect on coordination depending on the sample. Therefore, when expert knowledge is not available or it is not possible to use it due to costly reasons, we recommend using referent influence strategies for suppliers and reward influence strategies for buyers. Reward influence strategies should be used a third priority in improving coordination of suppliers' activities. The third priority in relationships with buyers would be informational influence strategies. Through legitimate influence strategies have a slightly positive effect on coordination of suppliers' activities one should be careful to use this kind of strategy. Since legitimate influence strategies have a strong negative effect on coordination of buyers' activities, we would also suspect that the effect of this kind of strategies in relationships with suppliers could be neutral or even negative. Coercive influence strategies are not recommended to be used for improving coordination, since they have negative effect in relationships with suppliers and with buyers. Negative effects can be observed through the use of coercive influence strategies. The scale of legitimate influence strategies should be used very carefully in cases when the target might feel intimidated and should be used in such a way that the target perceives it as a protective advantage.

The ranking of the influence strategies according to their effect on coordination is designed to help managers to make the right decision about choosing the appropriate kind of influence strategies for coordination purposes. We do not specifically suggest which combination of influence strategies is appropriate, but we advise supply chain managers to be very cautious in choosing the appropriate influence strategy and adjust it to the problem setting and strategic goals. Managers should know that there are not only coercive influence strategies, but also less aggressive influence strategies which can still effectively be used for improving coordination. The appropriate influence strategies can be applied depending on the goals and cost-benefit situations of the focal company.

Use of influences strategies for cooperation
The use of influence strategies for improving cooperation is a little different from the choice of strategies for coordination. Also, within each sample (suppliers or buyers) the use of influence strategies differs further. However, our findings indicate that expert influence strategies again have the top position according to the ranking with respect to the strength and sign of the effects (Figure 26). It seems that both kinds of partners – suppliers and buyers – appreciate the expert knowledge and consultations given to them by their superior partners. This in turn stimulates not only their activities, but also the long-term willingness to cooperate and helps to improve the overall cooperation in the supply chain network. Therefore, if a focal company possesses this kind of expert knowledge it should consider using expert influence strategies as first priority for improving cooperation. The second priority in improving cooperation of suppliers would be the use of informational strategies. Apparently suppliers have the greater need for expert knowledge and information in general. We assume that it can be explained by the fact that buyers might be more knowledgeable and possess more up-to-date information, which has an impact on suppliers' willingness to enter a cooperation relationship with buyers.

Figure 26. Ranking of influence strategies according to the recommended use for cooperation*
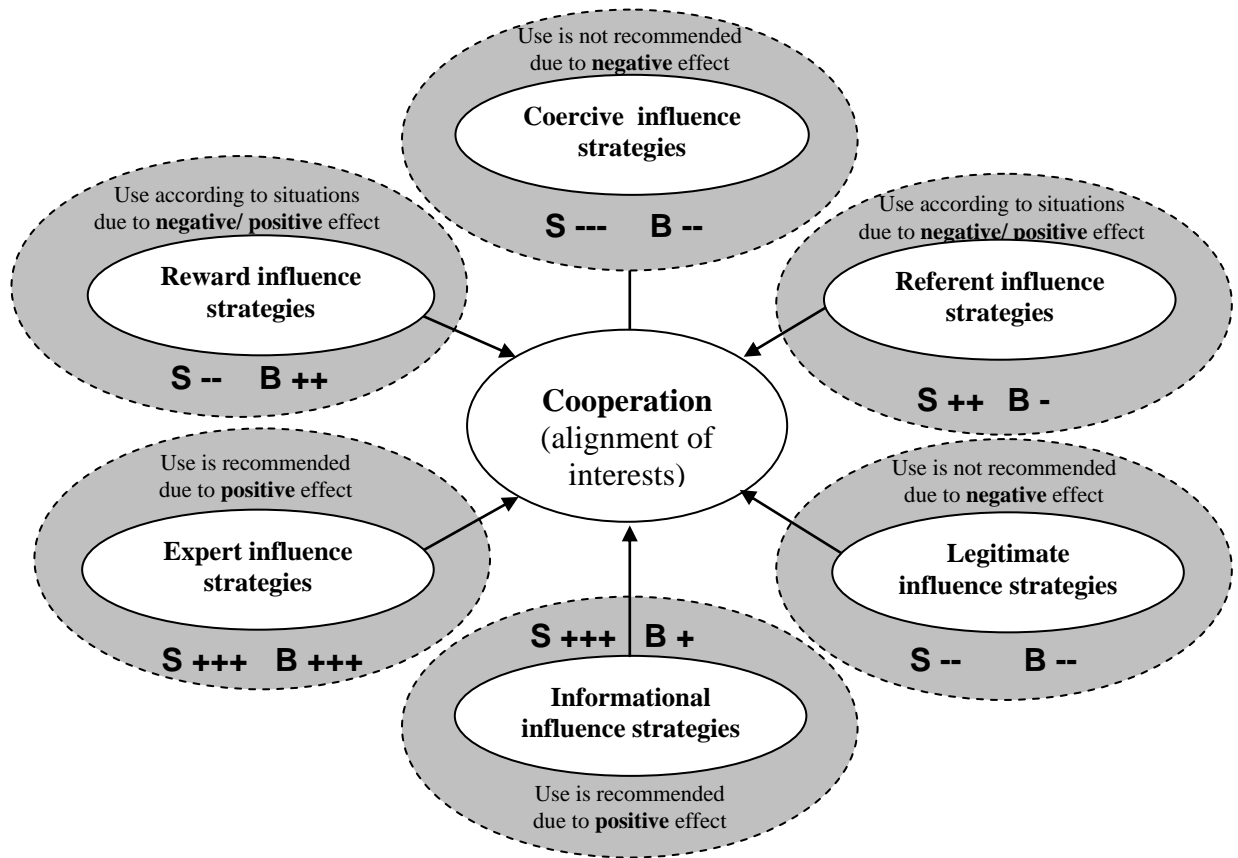
Ranking	S	B
1	Expert **+++**	Expert **+++**
2	Informational **+++**	Reward **++**
3	Referent **++**	Informational **+**
4	Reward **--**	Referent **-**
5	Legitimate **--**	Coercive **--**
6	Coercive **---**	Legitimate **--**

*Abbreviations:

+++   strong positive effect (path coefficient>0.2)
++   moderate positive effect (0.2>path coefficient>0.1)
+   weak positive effect (path coefficient<0.1)
-   weak negative effect (path coefficient<-0.1)
--   moderate negative effect (-0.2>path coefficient>-0.1)
---   strong negative effect (path coefficient>-0.2)
S   in managing relationships with suppliers
B   in managing relationships with buyers

Source: own accomplishment

In order to improve the cooperation of buyers one should choose reward influence strategies as a second priority after expert influence strategies. We can speculate that buyers are, on average, more interested in financial rewards than in gaining additional information from suppliers. The third priority for improving cooperation of suppliers belongs to the use of referent influence strategies.

If unable to use expert and, alternatively, informational influence strategies, the focal company should apply referent influence strategies in relationships with suppliers. Positive image and reputation forming the basis for referent influence strategies is likely to develop cooperative desires among network actors and can attract other companies to join a supply chain network. Probably suppliers' cooperative efforts could be more influenced by the positive reputation of buyers, since they believe that they can benefit from it. In improving cooperation of buyers, however, one should choose informational strategies as a third priority. Maybe buyers are less interested in benefiting from the image of suppliers due to the fact that buyers themselves have a stronger image and reputation.

Therefore, if expert and reward influence strategies are not available, suppliers should choose informational strategies to influence buyers' decision to cooperate. The danger of the destructive nature of coercive and legitimate influence strategies should not be ignored when discussing their role and implication for successful cooperation in supply chain networks. Very often managers apply coercive and legitimate influence strategies without calculating the long-term costs of maintaining the relationship. Since coercive and legitimate influence strategies are known for their punishing and formally aggressive nature, they should be used only when absolutely necessary. Otherwise they may destroy a cooperative relationship. Non-coercive influence strategies may be used to align interests and motivate targets. When influence strategies are not misused they always have the potential to influence the decision to cooperate.

Managerial implications
The analysis of the effects of different influence strategies suggests that managers should pay attention to the behavioural aspects of relationships in order to achieve a high level of performance in their business. The influence strategies could be applied separately or in combination to improve both coordination and cooperation in supply chain networks.

Our findings show that the use of expert influence strategies had the strongest effect among the six other kinds of influence strategies. A surprising conclusion is that this kind of influence strategies could be used effectively not only for cooperation, but also for coordination purposes within supplier-buyers relationships.

Therefore, managers should strive to enhance the expert knowledge of the company by hiring knowledgeable people and managing their expertise and skills in order to exercise this kind of influence strategies to improve SCM. We advise the use of expert influence strategies as a tool for SCM as a first priority. Retailers which are operating in Russia use modern SCM concepts which were proven to be effective and successful and possess the knowledge and expertise in how to organize and manage the whole supply chain network. Suppliers which do not have this knowledge would be more willing to cooperate with such experts as Metro, Auchan and others, and would be interested in long-term relationships as they are convinced in their progressive business practices. Managers should know that they have different possibilities to apply their expert and informational influence strategies and that they have different effects on cooperation and coordination from the short or long term perspective.

The use of reward influence strategies promotes both coordination and cooperation. Retailers develop their reward influence strategies by using discounts imposed for special events such as store openings. For example, Russian retailers practice return of expired

products to manufacturers. This means additional expense to suppliers. Therefore, some foreign retailers (Metro and Spar) made agreements with local suppliers, stipulating no return of expired goods. The same reward influence strategies are observed in payment tenor for shipped goods. Metro's payment tenor does not exceed thirty days, whereas other retail players have longer payment tenors - around 70 days. Such rewarding behaviour attracts suppliers and makes them more willing to cooperate with foreign retailers.

Another important implication for managers is the use of referent influence strategies. Metro Group Russia is already generating the basis for this kind of influence strategies through social commitment and corporate social responsibility, ranging from supporting cultural events to promoting social projects and the initiative for educating the youth in modern trade methods in Russia. This social commitment and support of education helps to create a favorable position in the eyes of Russian consumers. In this case we can notice that the image and reputation of Metro in Russia is increasing and with it its ability to use referent influence strategies. Russian people begin to be more familiar with this retailer and its commitment, which shapes the attitude of local suppliers towards Metro. Moreover, the use of referent influence strategies help to reduce anonymity, increase transparency and to create identification with the supply chain network, which reduces the chance that individual players will behave opportunistically.

Legitimate and coercive influence strategies may be less effective than expert, referent, informational and reward influence strategies in Russian agri-food supply chains, because they are less flexible and can often be viewed as having a rigid and uniform style in trying to impact specific performance by supply chain participants. The example of coercive influence strategies could be found in a relationship of Metro and its suppliers. To many suppliers, negotiating with Metro is like having one's arm twisted. They are pressed to reduce the prices and forced into a bonus system common in Europe: additional discounts during sales months, big sales bonuses, advertising bonuses, etc. Russian suppliers are also observed to possess the ability to exercise coercive influence strategies in the case of Auchan as they keep retailers waiting for ordered goods and dictate shelf space, control of which is crucial for a retailer. In reality some managers might think that the use of punitive tactics and coercive influence strategies is the most effective. However, they should think about the kind of goal they pursue in that specific partnership. If they want to keep the partner in the network for a longer period of time they should reconsider their influence tactics and use a more effective kind of influence strategies. The use of coercive influence strategies has a negative impact on SCM. Therefore, managers should refrain from the use of coercive influence strategies and use them only after other influence attempts have failed.

Legitimate influence strategies might stem from a strong market position (characterized by a high market share and/or effective entry barriers for new competitors. For example, X5 Retail Group increased its market share by merging Perekrestok and Pyaterochka, as a result its market influence has increased. The market share of some big retailers serves as a legal means to exert their influence on their suppliers. In this case we can speak of an ability to apply legitimate influence strategies gained through the position on the market. Based on our results we advise managers to calculate the costs and benefits of using non-coercive influence strategies instead of coercive in case they can afford to overlook short-term issues while focusing on long-term values and relationships.

Perhaps the main implication of this research for managerial decision making is that successful management of supply chain networks can be achieved by application of not only coercive, but also legitimate, referent, expert, informational, and reward influence strategies. Coercive influence strategies should be used very carefully. Direct punishment without even explaining or warning the target might have destructive effects on the long

term relationship, since punishing reduces the economic resources of the target, and thus reduces the motivation to participate in the exchange further. The use of expert, reward, referent and information influence strategies generally promotes a trustful and cooperative relationship among actors and should be used with this intention.

The 'stick or carrot' method (coercive or reward influence strategies) might have superb effects for companies having short-term goals and possessing financial resources, since such influence strategies provide extrinsic motivation to comply with the requirements in order to achieve favourable outcomes. On the other hand, other non-coercive influence strategies (expert, informational and referent) might be more appropriate to facilitate both coordination and cooperation for companies which possess the expert knowledge, up-to-date information and strong positive image and wanting to invest into the long-term partnerships. Using influence strategies does not always imply that coercive actions have to be taken. Instead, knowing that influence strategies also stem from the ability to give rewards might lead to a change in behaviour enhancing cooperation. This is particularly valuable because chain management is not only about the alignment of actions (coordination) but also about the alignment of interests (cooperation). Depending on the kind of influence strategies and the source they originate from, their effects may be completely different. The summary of implications for management of supplier-buyer relationships in the Russian agri-food business is presented in Appendix 17.

It is important to understand the multifaceted effects of different influence strategies and apply them selectively for a specific purpose. In order to use the influence strategies managers should consider the pros and cons of different strategies in order to make the right choice according to the defined goal. The following management algorithm of using influence strategies might help them to do it (Figure 27):

1. Goal Setting

The first stage is setting of a goal (e.g., aligning of interest, or aligning of actions). Managers should set their goal for which they need to influence the decisions, intentions or actions of their partners.

2. Assessment of Resources

The next stage would be to assess the available resources and eventually acquire some. For example, coercive influence strategies do not require specific resources or investments except for the ability to implement them. However, the use of coercive influence strategies might cause specific costs. Managers might decide to acquire new resources such as expertise in the field, information, etc. in order to use them for influencing purposes.

3. Choice of Influence Strategies

After resources are assessed and built in case of need, the next step would be to choose from a multitude of influence strategies which can be used for the achievement of this particular goal. This decision is made on the basis of the ranking of the influence strategies according to their expected effects as well as on the basis of costs and benefits of required resources and implementation of influence strategies.

4. Exercise of Influence Strategies

Managers make an influence attempt by exercising the chosen influence strategy.

5. Outcome of Influence Strategies

The exercise of influence strategies results in a certain outcome (compliance or resistance). Depending on whether the goal was reached or not, managers may decide to repeat an influence attempt by using alterative influence strategies depending on their ranking and cost-benefit analysis and the pursued goal.

Figure 27. Management algorithm of using influence strategies
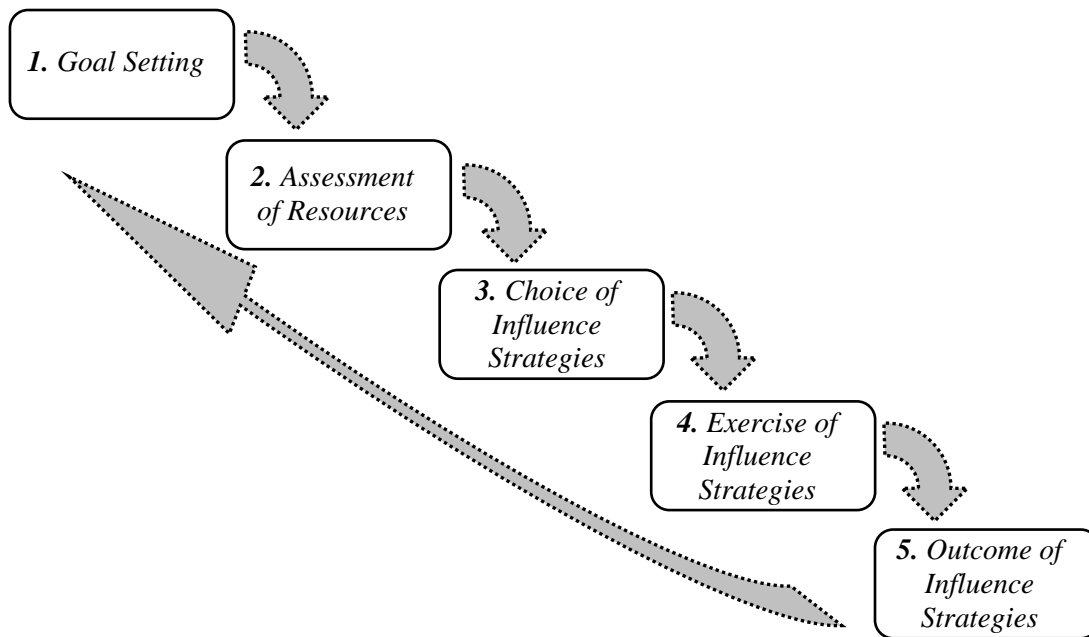
Source: own accomplishment

Our recommendations can help managers to understand different interactions of these factors, and to design their management practices to successfully manage supply chain networks. For managerial implication this means that the use of influence strategies must be done thoughtfully. Thus, knowing these expected effects of the chosen influence strategies can help to work out strategies how to deal with problems of cooperation and coordination in supply chain networks. Our study has important implications for manufacturers who are willing to stop neglecting relational and behavioural aspects of managing business partners in supply chains. As competition among firms and networks in international markets intensifies, companies should consider not only improving their margins and increasing their profits for the time being in arm's-length relationships, but they should invest more into the quality of relationships and use such means as influence strategies to improve the SCM of the whole network for a long-term period. The results of this study may also prove helpful to managers by highlighting the need for use influence strategies as an alternative means to trust, which needs to be built at first and requires more effort.

These insights should allow managers to critically examine their set of managerial tools and strategies and make the needed changes and adjustments in order to use them for improving the performance of the whole supply chain network, from which all supply chain members can benefit.

8.4 Limitations of Research

The main contribution of our study is the establishment of a solid foundation for future research on studying the role of influence strategies for management of agri-food supply chain networks. However, as in any study the findings of this research should be seen within the context of some limitations which could stimulate further research. The limitations of this study are discussed below.

Need for additional refinement of measurement scales

In order to test our model using the technique of Partial Least Squares (PLS) path modeling we developed new measures of influence strategies and SCM (with distinct attention to coordination and cooperation issues) for this study. However, additional refinement is needed to clarify and improve the operationalizations of variables. In order to test the developed measures additional theoretical and empirical research is needed in order to examine whether the chosen scales were correct. Our operationalizations of variables do correspond from our point of view with the necessary degree of preciseness. Nevertheless, since their development was mainly based on the "pen-and-pencil" method, additional work would help to improve their quality.

Robustness of results

Furthermore, we faced certain challenges while assessing the model with many variables. We had a task to assess a relatively complex model with a relatively small sample size of 89 food processors. Also, each empirical study usually has some minor measurement problems and our study is no exception. The measures of Cronbach's α for legitimate influence strategies in our study are 0.523 (suppliers' sample) and 0.442 (buyers' sample), which is slightly lower than 0.6. We also faced problems with accepting the values of AVE, which means that a latent variable is able to explain more than half of the variance of its indicators on average and should be higher than 0.5. The variables which do not correspond with this rule in Model 1 (suppliers' sample) is cooperation (0.473) and in Model 2 (buyers' sample) – coordination (0.412). All these facts may raise some concerns about the actual robustness of our results. Therefore, further research should be conducted in order to view the proposed theoretical model as a managerial tool.

Conducting research from the viewpoint of focal companies

We put the special focus of our research on the position of a focal company. The focal company represents the managerial center of the supply chain network and is expected to manage the whole network in order to realize the strategic objectives. The focal firm is in general that firm that is identified by the consumers as being 'responsible' for the specific food item, e.g., the producer in the case of a producer brand and the retail firm in the pyramidal-hierarchic case of a private brand. For the testing of our theoretical model we collected the data from food processing companies and from retailers. However, due to the fact that the group of retailers was quite small, we were able to conduct only 8 interviews with them. For model assessment we deleted retailers from the sample in order to sustain the homogeneity of the units of analysis and avoid biased results. Therefore, the data in our PLS analysis represents only a single perspective in the dyad: food processing companies. In this context, we are aware of the fact that gathering data from other companies' perspectives, such as retailers (under the condition that a sufficient number of interviews could be conducted) or agricultural producers (which are the suppliers of food processors or of retailers in case of fresh produce), could have produced different (presumably more realistic or complete) findings. We also cannot assess whether or how the perceptions of other groups of members in supply chain networks differ from each other. Therefore, though we address the concept of supply chain networks in the theoretical part of the thesis, we were able to gather the data from only one side of a dyadic relationship (fortunately with respect to the two kinds of relationships: suppliers and buyers). Therefore, since our study could be regarded as "quasi-dyadic", the results should be interpreted with this in mind. We suppose that if data were collected from other supply chain partners, we could gain more insights into the role of influence strategies in SCM

and could work out more precise managerial implications for different groups of companies.

Absence of time series data
Another limitation of our research could be seen as the absence of time series data. We are aware of the fact that in examining supplier-buyer relationships one needs to take into account the dynamic nature of exchange relationships, since they change over time. Unfortunately, our study does not capture changes in the variables used over time. We considered the role of influence strategies in SCM only at one particular point in time. Having time series data would surely provide more insights into the changes in supplier-buyer relationships.

Common-method bias
The concreteness of the latent constructs depends on the judgment of respondents in any study. In our survey we ask respondents to report on observable aspects of their relationships with suppliers and with buyers. Therefore, we assume that the link between their perception and the reality is strong. However, the respondents in our survey are humans, and humans tend to make false statements for various reasons. Besides the problems of the reliability of perceptions (which exist in any study) we must consider the fact that we used only one source of information for our quantitative measurement. Since the data for the exogenous and endogenous variables stems from one source, one should be prepared to deal with common-method bias. Common-method bias represents the discrepancies between the observed and the true relationships between constructs due to false perceptions of the respondents. The problems with conducting the survey with only one group of respondents and using the data to estimate causal effects is that the respondents might understand the assumed effect we are researching and give us biased answers depending on their own conclusions. As a result, the possibility of a common method bias resulting from the use of a single source should be kept in mind.

Generalizability and applicability of results
Our research was conducted in a particular setting: the Russian agri-food business. This fact raises the common question of generalizability of the obtained results of the study. One should keep in mind that attitudes, culture and the way of conducting business are different in every country. Our findings are based only on a single study conducted in a single country. A reproduction of this project on a different group of respondents or on the same group of respondents, but at a different point of time, would presumably produce different research results. Of course, testing the model in other settings and contexts would allow more plausible results to be obtained. We also investigated only a limited number of companies (89), which were ready to give us an expert interview. Therefore, our results are only valid for this one specific sample. A sample is generally expected to reflect the basic population from which it stems. However, there is no guarantee that this particular sample is representative of the whole population of companies from which it stems. We are aware of the fact that conducting a survey of the whole magnitude of companies with the necessary criteria (and not just a small sample of less than 10%) would probably deliver different (presumably more precise) results and make the findings more generalizable. Therefore, the findings of this study cannot be directly generalized to other contexts. As a result, great caution should be used when extrapolating the results of this single study to other contexts.

In spite of the discussed limitations of the research we believe that they are not overly problematic. One should keep in mind that only a limited amount of time and financial

resources were available for conducting this study. Therefore, we are aware of the fact that the findings are constrained by the above-mentioned employed research techniques and data quality. The limitations of this study could stimulate further potential directions of research on the role of influence strategies in SCM.

8.5 Outlook for Future Research

The findings of our research are quite intriguing. Thus, we think that it would be worthwhile to further investigate these findings in more detail. There is still a lot of room for further research to increase the understanding of the role influence strategies play in SCM. We hope that both academics and professionals would be interested in further investigations of this area of research, which would increase the effectiveness of practical and theoretical implications. Though we were able to obtain the necessary results to verify our hypotheses, they raised a number of questions. For example, why the perceived effects of coercive influence strategies turned out to be negative for coordination? We found support in the theoretical literature and empirical studies about the rule-setting nature of this kind of influence strategies. In spite of the hypothesized positive effects of coercive influence strategies on coordination, the results did not support our hypothesis. Based on our theoretical framework, we suggest the following directions for future research.

Conducting research by using refined theoretical concepts and measurement scales
As already mentioned, we developed new measurement scales for the latent constructs in our study. Nevertheless, the theoretical perspectives of other researchers could also provide valid contributions to the refinement and further development of these measures.

Conducting research in other empirical settings using bigger sample sizes
We suggest testing our model using the developed survey tool in other empirical settings. This could be done after minimal adjustments in the survey tool depending on the industry and country of the study. The obtained results could help to increase the generalizability of our research and provide new insights into the nature of behavioural role of power and the use of influence strategies for improving managerial aspects of supply chain relationships.

Conducting research from a network perspective
Future research may explore the situation from not only the focal company's perspective, but also from the perspectives of other supply chain members. It would be interesting to know which factors account for the differences among the relevance and the ranking of the influence strategies in different samples of companies. Besides, one could examine the effect of the availability of resources on the decision to use specific influence strategies. Further factors may include, but are not limited to, the cost-benefit nature of specific influence strategies. All these factors could be checked for their relevance by extending our survey tool. Data gathered from different groups of companies (retailers, food processors, raw material suppliers, intermediaries, trading companies) might provide more information on how to manage supply chain networks successfully.

Conducting research on the basis of time series data
Besides testing the model on different groups and extending the questionnaire further research should consider obtaining the data from the same sample at several points of time. It would be interesting to know whether the studied concepts change over time and whether the phenomenon of dynamism of networks has any impact on those developments.

Conducting research on the impact of influence strategies on other constructs
Another interesting area of research would be to test the role of influence strategies in reducing the conflict or improving the relationship quality in supply chain networks. Also, the existing model could be extended by adding another latent construct – performance of supply chain members. In this way, the future research could study the impact of the use of different influence strategies on improving performance indirectly (through the improvements in cooperation and coordination) or directly (by eliminating the constructs cooperation and coordination).

We hope that our research will open several new avenues for further research and believe that the contributions of our study to the theory, empirical evidence, methodology and management, together with these suggestions for further work, will fuel the future scientific work in this area of research.

8.6 Summary of Contributions and Concluding Remarks

It should be noted that despite the discussed limitations, the current study provides valuable insights into the concept of influence strategies in supply chains and networks and their role for SCM and offers recommendations to managers on how to use influence strategies as an effective tool for chain management.

The aim of the thesis was to investigate the influence strategies in supply chains and networks and their role for SCM in order to work out an overall strategy that enables supply chain managers to select an effective mix of managerial mechanisms for coordinating the whole supply chain network. The accomplishment of the aim of the thesis was carried out by answering the posed research questions, which are reflected in the contributions of the thesis discussed in detail in the previous sections of this chapter. We grouped the main contributions and implications of the thesis according the following four general categories: theoretical contributions, methodological and empirical contributions, and managerial contributions.

The contributions were developed in *Chapters 1-5* and covered the following issues.

Chapter 1. We defined the existing gap in the literature and indicated how our research is connected with other areas of research. We also indicated the role of power and influence strategies and their relevance for chain management concepts by highlighting the importance of the defined research aims and tasks.

Chapter 2. We conducted a literature review on the concepts of networks as a form of interfirm cooperation in general. We also clarified the meaning and the main characteristics of such concepts as supply chains, strategic networks, supply chain networks and identified the types of networks which were in the focus of this thesis. We reviewed literature dealing with the concept of influence strategies in order to clarify its meaning, definition, classification and role in supply chains and networks.

Chapter 3. We also presented a thorough review of the relevant literature dealing with the concept of SCM and identified two important areas within this concept: coordination and cooperation.

Chapter 4. After reviewing the theoretical concepts we developed our own theoretical model on the role of influence strategies for SCM and a number of research assumptions and hypotheses about the negative and positive effects of influence strategies on coordination and cooperation.

The theoretical contributions of the thesis could be summarized as follows:
1. Extension of the body of knowledge and clarification of the concept of supply chain networks
2. Extension of the body of knowledge and clarification of the concept of supply chain management
3. Extension of the body of knowledge and clarification of the concept of influence strategies
4. Investigation of the role of influence strategies for supply chain management from the theoretical point of view and working out a theoretical model
The empirical contributions were developed in *Chapters 5-6* and covered the following issues.
Chapter 5-6. We conducted our empirical investigation in the Russian agri-food business as an empirical setting of analysis. The first part of our research was based on the secondary data. The next part was based on two rounds of interviews conducted with experts of the Russian agri-food business and representatives of companies with foreign direct investments in the Russian agri-food business. The results of the empirical analysis represent valuable research findings and empirical contributions of the thesis.
The empirical contributions of the thesis could be summarized as follows:
5. Empirical evidence about the relevance of the theoretical frameworks on supply chain management based on the framework of Hanf and Dautzenberg (2006) and of the classification of influence strategies according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) in the Russian agri-food business
6. Empirical evidence about the characteristics of supplier-buyer relationships in the Russian agri-food business on the basis of the conducted qualitative research
7. Empirical evidence about the relevance and existence of power asymmetry and the distribution of power along the supply chain in the Russian agri-food business
8. Empirical evidence on the basis of quantitative information about the frequencies of use of influence strategies for improving supply chain management as well as about the level of satisfaction of managers with supply chain management in Russian agri-food supply chains
The methodological and managerial contributions were developed in *Chapters 7-8* and covered the following issues.
Chapter 7. In order to test our model empirically we introduced the Partial Least Squares technique. We explained the reasons for the choice of this methodology and systemize the existing literature on this approach. We also compared this technique with other approaches of Structural Equations Modeling (SEM) and discovered that this was the best one suitable for our research. Besides, we also developed our own measurement scales for the latent constructs in our model, which could also be considered a valuable contribution to the methodological research.
Therefore, the methodological contributions of the thesis could be summarized as follows:
9. Development of the operationalizations of variables for the concepts influence strategies and supply chain management
10. Introduction of Partial Least Squares (PLS) path modeling, the technique of Structural Equation Modeling (SEM), in the setting of the Russian agribusiness management, and clarification of its advantages and disadvantages
Chapter 8. In this chapter we mainly focused on the development of recommendations for managers using the obtained results of the model assessment by means of the Partial Least Squares (PLS) technique of Structural Equations Modeling (SEM). We analyzed the results of the discussion and developed a ranking of the influence strategies according to their expected effects on coordination and cooperation in the Russian agri-food business.

The managerial contributions of the thesis could be summarized as follows:

11. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to coordination issues in relationships with suppliers (Managerial implications I1a, I2a, I3a, I4a, I5a, I6a)

12. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to coordination issues in relationships with buyers (Managerial implications I1b, I2b, I3b, I4b, I5b, I6b)

13. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to cooperation issues in relationships with suppliers (Managerial implications I1c, I2c, I3c, I4c, I5c, I6c)

14. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to cooperation issues in relationships with buyers (Managerial implications I1d, I2d, I3d, I4d, I5d, I6d)

It is surprising that the issue of the use of influence strategies in supply chain networks has not been exhaustively addressed in research. The majority of research conducted to date has assumed that influence strategies 1) are irrelevant and not suitable for being used in the SCM context; 2) their use is based on the power asymmetry and the abuse of power and leads to negative effects; 3) trust is a better alternative for improving supply chain relationships. The studies dealing with relational constructs in supply chain relationships have paid attention to other constructs such as trust, commitment, relationship quality etc. Our study disproves the above mentioned statements and offers a new perspective and new direction for further research on the role of influence strategies for SCM. The power asymmetry is a natural state for any relationship including supply chain relationships. To believe that power asymmetry is bad is not correct. More powerful leaders in supply chain networks known as 'chain captains' can use the power advantage for the good of the whole network. Moreover, weaker partners in asymmetric relationships can benefit from the existence of 'chain captains' and their strategies. Power asymmetry is not a barrier in supply chain networks. It can promote the coexistence of both cooperative and competitive aspects in any supply chain relationship. In fact, our findings document that influence strategies could have a profound impact on the improvement of coordination and cooperation in supply chain networks.

The influence strategies can have both positive and negative effects on coordination and cooperation within supply chain relationships and could be used to coordinate and to foster collaboration without exploitative or abusive consequences. The summary of contributions of the thesis is presented in Appendix 18.

Overall, the results of our study have a high theoretical and practical relevance based on the developed rankings of influence strategies according to their expected effects and on the management algorithm for applying certain influence strategies for specific goals. The use of influence strategies is an important managerial issue. The time has come for a new and fresh approach to solving managerial problems in a supply chain context. We hope that our research results and ideas will be of interest for both academics and practitioners and will encourage them to rethink their current practices and ideas and to use influence strategies as an effective tool in a problem-solving and constructive way to enhance the performance for a supply chain network as a whole as well as for its individual members.

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Expert interview

"Coordination mechanisms for managing agri-food supply chains in Russia"

Most international retailers and branded food processors (also called „Supply Chain Captains") after entering Russia introduce their business models in their work with local suppliers which proved to be successful in their home countries. One of the main issues faced by such companies is how to manage the supply chain successfully and to maintain beneficial business relationships with their suppliers. Is it enough to use information exchange across the supply chain to insure that suppliers comply with the management requests of „Supply Chain Captains" or are stricter measures necessary such as punishments and negative sanctions to insure that the whole supply chain is operating successfully? To answer this and other questions, Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO) is conducting a research project on management of food supply chains in Russia. The current expert interview is part of this project and aims to reveal the opinions of experts about relationships of international food retail and processing companies with their suppliers in Russia (farmers in case of processing companies and processors and fresh produce farmers in case of retail companies). The interview will last not longer than **10-15 minutes**.

1. Which problems do you think foreign retailers and food processors encounter while working with their suppliers in Russia?

2. To what extent do you think that foreign retailers and food processors are able to influence their suppliers in Russia to make them comply with their requirements?

3. What kind of mechanisms do you think foreign retailers and food processors mainly use to make their suppliers in Russia comply with their requirements? Why (or why not) do they use such mechanisms?

(for example: supervision, negative sanctions, threats, formal and informal agreements, emotional appeal, educational activities or qualification opportunities, collaborative discussion, persuasive arguments, sharing of key information, involvement in decision-making process, expert advice, approval or disapproval of actions, promises of desirable or financial inducements, requests or claims on the basis of legal obligations or identification with the company, etc.)

4. Which mechanisms do you think are the most successful for managing food supply chains in Russia and why?

(for example: they help to increase motivation and alignment of goals, values and interests, prevent opportunism in the supply chain, improve logistics and decision-making processes, increase predictability of other's actions in the supply chain, etc.)

Appendix 2. Schedule of conducting expert interviews (Telephone Survey A)

16.11.2009	17.11.2009	18.11.2009	19.11.2009 №1 1.35-2.00 p.m.	20.11.2009	21.11.2009
23.11.2009	24.11.2009	25.11.2009	26.11.2009 №2 11.30-12.00 a.m. №3 15.00-15.30 a.m.	27.11.2009	28.11.2009
30.11.2009 №4 3.00-3.20 p.m. №5 4.00-4.15 p.m.	01.12.2009 №6 09.00-09.15 a.m. №7 4.30-5.00 p.m.	02.12.2009 №8 2.00-2.15 p.m. №9 2.20-2.40 p.m. №10 2.45-3.10 p.m. №11 4.00-4.15 p.m. №12 6.00-6.15 p.m.	03.12.2009 №13 2.00-2.40 p.m.	04.12.2009	05.12.2009
07.12.2009 №14 09.00-09.20 a.m. №15 10.00-10.35 a.m. №16 11.20-12.20 a.m. №17 3.00-3.25 p.m. №18 3.25-3.45 p.m. №19 3.45-4.00 p.m. №20 4.00-4.45 p.m.	08.12.2009 №21 16.30-16.45 a.m.	09.12.2009	10.12.2009 №22 10.30-11.00 a.m. №23 11.00-11.30 a.m. №24 11.30-12.00 a.m. №25 5.00-5.30 p.m.	11.12.2009	12.12.2009

21.12.2009 №26 4.45-5.00 p.m.	22.12.2009	23.12.2009 № 27 11.00-11.15 a.m. № 28 11.15-11.55 a.m. № 29 1.45-2.00 p.m.	24.12.2009	25.12.2009	26.12.2009
04.01.2010	05.01.2010	06.01.2010	07.01.2010 № 30 7.00-7.15 p.m.	08.01.2010	09.01.2010
11.01.2010	12.01.2010	13.01.2010 № 31 10.40-11.00 a.m. № 32 11.50-12.05 a.m.	14.01.2010	15.01.2010	16.01.2010
18.01.2010	19.01.2010 № 33 2.35-2.50 p.m.	20.01.2010	21.01.2010 № 34 6.00-6.15 a.m.	22.01.2010 № 35 11.30-11.45 a.m.	23.01.2010
25.01.2010	26.01.2010	27.01.2010	28.01.2010 № 36 11.20-11.40 a.m. № 37 11.40-11.55 a.m. № 38 12.20-12.35 a.m. № 39 12.40-12.55 a.m.	29.01.2010 № 40 06.00-06.15 a.m.	30.01.2010

Appendix 3. Information about interviews (Telephone Survey A)

| №	Date of interview	Job title of interviewee	Type of institution	Type of interview	Language of interview	Place of interview	Duration of interview
1	19.11.2009	Expert analyst	Russian association of milk producers	Telephone	Russian	Halle (Saale), Germany	25 min.
2	26.11.2009	Executive Director	Russian association of retail companies	Telephone	Russian	Moscow, Russia	30 min.
3	26.11.2009	Assistant of the Deputy Chairman	State Duma	Telephone	Russian	Moscow, Russia	30 min.
4	30.11.2009	Managing Partner	Russian consultancy company	Telephone	Russian	Halle (Saale), Germany	20 min.
5	30.11.2009	Project Coordinator	Russian consultancy company	Telephone	Russian	Halle (Saale), Germany	15 min.
6	01.12.2009	Managing Director	German consultancy company	Telephone	German	Halle (Saale), Germany	15 min.
7	01.12.2009	Long-term Expert and Project Coordinator	German consultancy company	Telephone	German	Halle (Saale), Germany	30 min.
8	02.12.2009	Manager in Finance & Administration	International branded confectionary company	Telephone	Russian	Halle (Saale), Germany	15 min.
9	02.12.2009	Head of Government and Public Relations Department	German Cash & Carry and retail trade operator	Telephone	Russian	Halle (Saale), Germany	20 min.
10	02.12.2009	General Director	Russian beef producer	Telephone	Russian	Halle (Saale), Germany	25 min.

№	Date of interview	Job title of interviewees	Type of institution	Type of interview	Language of interview	Place of interview	Duration of interview
11	02.12.2009	Specialist on Operational Planning	Russian branded milk processing company	Telephone	Russian	Halle (Saale), Germany	15 min.
12	02.12.2009	Key Account Manager	Russian branded milk processing company	Telephone	Russian	Halle (Saale), Germany	15 min.
13	03.12.2009	Category Development Manager	International branded non-alcoholic beverage producer	Telephone	Russian	Halle (Saale), Germany	40 min.
14	07.12.2009	Agricultural Policy Advisor	Russian agricultural policy representative	Telephone	German	Halle (Saale), Germany	20 min.
15	07.12.2009	Head Cooperations CIS countries	German agriculture association	Telephone	Russian	Halle (Saale), Germany	35 min.
16	07.12.2009	Senior Researcher	German higher education institution	Telephone	German	Halle (Saale), Germany	60 min.
17	07.12.2009	Business Consultant	German consultancy company	Telephone	Russian	Halle (Saale), Germany	25 min.
18	07.12.2009	Senior Agricultural Economist	US agricultural policy research institution	Telephone	English	Halle (Saale), Germany	20 min.
19	07.12.2009	Manager of International Sales for Retail Sector	International market research company	Telephone	English	Halle (Saale), Germany	15 min.
20	07.12.2009	Partner	Russian consultancy company	Telephone	Russian	Halle (Saale), Germany	45 min.
21	08.12.2009	Professor and General Director	Russian consultancy company	Telephone	Russian	Halle (Saale), Germany	15 min.

№	Date of interview	Job title of interviewees	Type of institution	Type of interview	Language of interview	Place of interview	Duration of interview
22	10.12.2009	General Director	Russian branded meat processing company and retailer	Telephone	Russian	Halle (Saale), Germany	30 min.
23	10.12.2009	General Director	German ingredients supplier for food processing industry	Telephone	Russian	Halle (Saale), Germany	30 min.
24	10.12.2009	General Director	German market research institution	Telephone	German	Halle (Saale), Germany	30 min.
25	10.12.2009	Senior Credit Risk Manager	International trade company	Telephone	Russian	Halle (Saale), Germany	30 min.
26	21.12.2009	General Director	Russian grain producer	Telephone	German	Halle (Saale), Germany	15 min.
27	23.12.2009	Managing Director	German consultancy company	Telephone	German	Halle (Saale), Germany	15 min.
28	23.12.2009	Professor and Senior Adviser to Director	International agricultural policy research institution	Telephone	Russian	Halle (Saale), Germany	40 min.
29	23.12.2009	Retail Manager	Russian market research institution	Telephone	Russian	Halle (Saale), Germany	15 min.
30	07.01.2010	Sales Manager	German seeds breeding and producing company	Telephone	German	Halle (Saale), Germany	15 min.
31	13.01.2010	Special Adviser	Federal Ministry of Agriculture	Telephone	Russian	Halle (Saale), Germany	20 min.
32	13.01.2010	Consultant	Russian agricultural consultancy company	Telephone	Russian	Halle (Saale), Germany	15 min.
33	19.01.2010	Category Manager of Purchase department	German retailer	Telephone	Russian	Halle (Saale), Germany	15 min.

№	Date of interview	Job title of interviewees	Type of institution	Type of interview	Language of interview	Place of interview	Duration of interview
34	21.01.2010	Manager of image projects	Russian branded brewing company	Telephone	Russian	Halle (Saale), Germany	15 min.
35	22.01.2010	Consultant	German consultancy company	Telephone	Russian	Halle (Saale), Germany	15 min.
36	28.01.2010	Manager of Department of Operations Retail	Russian retail company	Telephone	Russian	Halle (Saale), Germany	20 min.
37	28.01.2010	Manager of Department of Commerce	Russian retail company	Telephone	Russian	Halle (Saale), Germany	15 min.
38	28.01.2010	Manager of Purchasing Department	Russian retail company	Telephone	Russian	Halle (Saale), Germany	15 min.
39	28.01.2010	Public Relations Manager	Russian retail company	Telephone	Russian	Halle (Saale), Germany	15 min.
40	29.01.2010	Professor of Marketing	Russian higher education institution	Telephone	Russian	Halle (Saale), Germany	15 min.

Appendix 4. Information about structure of sample (Telephone Survey A)

Structure of sample according to the kind of companies interviewed
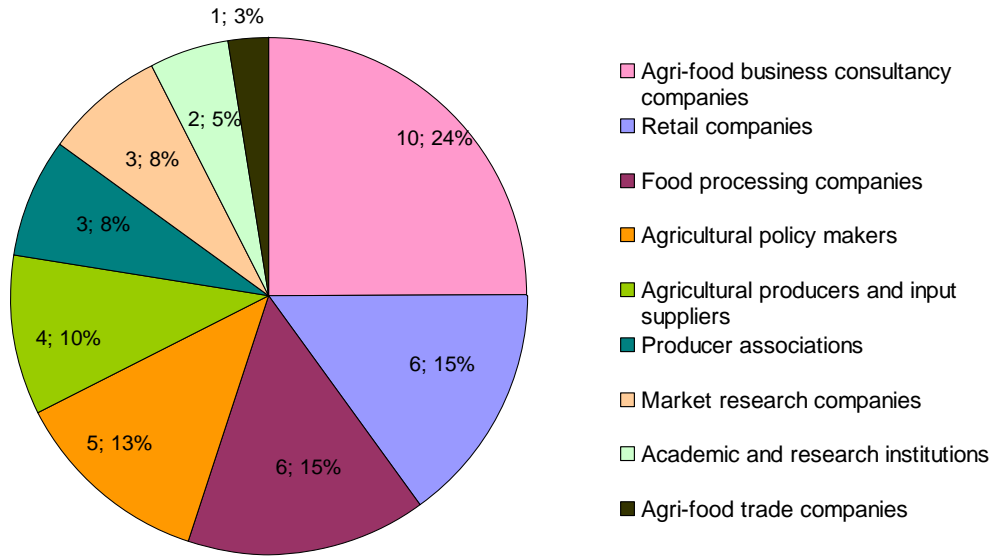
Structure of sample according to the language
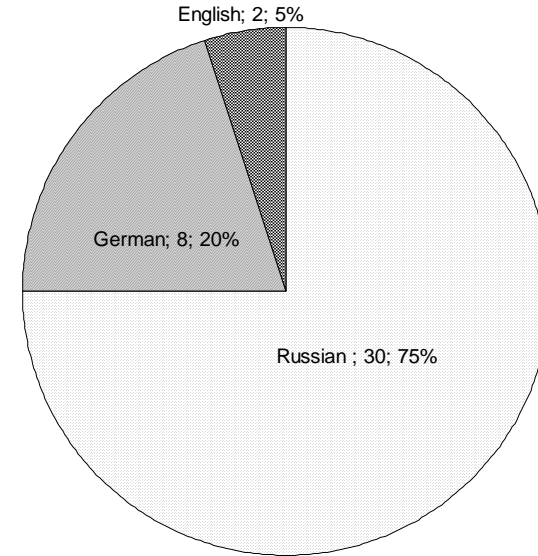
Duration of interview
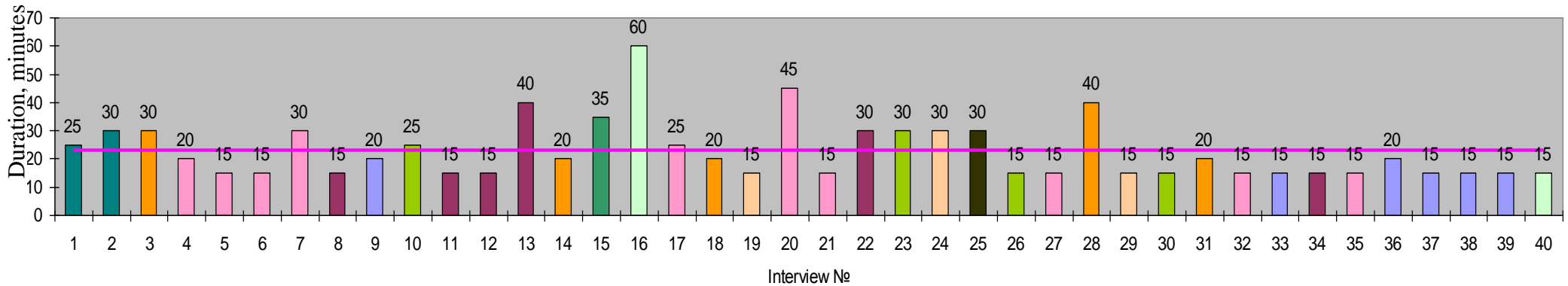
Average duration – ca. 23 min.

Overall duration – 910 Minutes (15,2 hours)

Source: own accomplishment

Appendix 5. Summary of findings from expert interviews (Telephone Survey A)

Research issue	Findings	Illustrative quotations
		Characteristics of supplier-buyer relationships in Russia
Conflicts	Suppliers are unsatisfied with retailers due to e.g. shelf-space fees, high entrance requirements, which causes tension and conflict.	*"...retailers do not have the capacity to take all products which producers have to offer. As a result, e.g. out of 90 suppliers only about 10 are chosen by retailers to supply the products. Therefore, the rejected 80 are not satisfied, which leads to conflicts and tension in the relationships among retailers and suppliers."* *"Due to the entrance and preferred shelf-space fees most of the small and medium producers cannot afford to supply the retailers. The competition among the big producers is strong enough, therefore, those who have a chance to work with the retailers, fulfil all their caprices."* *"I wouldn't say that there are problems in retailer-supplier relationships in Russia. It is more chances and risks. The interests of retailers often are different from those of suppliers; therefore, there appear conflicts of interests. Every one is working for its own purse."*
Harmonious relationships	Foreign food processors and retailers invest into the suppliers with an aim to ensure the improvement of their competence and the long-term orientation of relationships.	*"Usually most foreign companies have very good supplier management. They are known for their engagement in teaching their suppliers."* *"... I can present a concrete example when a processor on behalf of company Tönnies Fleisch has harmoniously entered the business in socially-economic structure of the region and has developed prospects of development in the form of constructive cooperation with suppliers and consumers."* *"One can compare this relationship with that one a husband and wife – they quarrel with each other but they cannot live without each other. The same relationship exists between retailers and suppliers."* *"In general, we do not have any conflicts with suppliers. Conflicts might appear if the supplier and the retailer have different levels of development."*
		Problems of working with Western partners
High demands for Russian partners	Foreign retailers prefer to work with big suppliers in order to improve their efficiency and reduce transaction costs.	*"We do not cooperate with big retailers because they are known for their system of entry bonuses. We try to avoid paying such bonuses which are in other words briberies. Big retailers have in general very high demands and are difficult to work with, For example, big retailers might return to us our products if they cannot sell it. That is why we prefer working with medium-sized retailers."* *"Chains are working mostly with big suppliers because it is easier for them to organize the production and to insure for the big standardized deliveries of products with similar size and characteristics."*

Research issue	Findings	Illustrative quotations
Poor knowledge of Russian market and culture	Foreign food processors and retailers miss the knowledge of the cultural specifics of the Russian market.	*"The problems of foreign companies in Russia include: the poor knowledge of the Russian market, the way business in Russia is done, the cultural and country specific differences."* *"...some foreign food processing companies come to Russia and think that Russian consumers are the same as European. But Russian people have a different taste and different eating culture. So these things are sometimes not considered."* *"I mean it is of an advantage to know the language and not having to use an intermediary all the time. But speaking the language does not mean automatically that you understand the culture and mentality. They need people who lived both in Russia and abroad who understand both cultures. And I do not think that there are many such people."*
Lack of flexibility and adjustment of management style to local conditions	The strategies and management concepts of foreign food processors and retailers need to be adjusted to the Russian conditions and to the realistic requirements.	*"In principle it is possible to find the right suppliers in Russia. You just have to be more flexible and adjust to new conditions like did Hochland. Ritter Sport is an example of low flexibility. They could not find good suppliers of ingredients in Russia for the same money as in Germany. But look at Nestle, Mars and KraftFoods. They are successfully operating their production facilities in Russia. So this all because of the lack of flexibility of some Western companies."* *"Foreign retailers are different from Russian ones in the way that they are much more conservative and cannot easily react to the changing situation. Russian companies are like repair shops or potteries – they are more flexible and can adjust easily to a new environment. The classical example of a conservative company is Carrefour. It is known for its strictness and absence of flexibility."* *"I know that Carrefour is leaving. The main reason is that you cannot just get into the country and do the business the way it is done in France. You have to take into consideration what people want to have, how they want to have it. It is different in France, it is different in Germany, just like it is different in Russia and in Poland."*
		Problems of working with Russian partners
Quality of agricultural supplies	There are discrepancies between the expectations of the retailers and processors and the quality of the supplies which Russian suppliers can offer.	*"...one has to say that in general the raw milk quality in Russia is still lacking behind. The central part of Russia has more such international processing companies than other parts of Russia. Therefore, the share of the 1st class quality raw milk represents in the central part of Russia about 80-90% of all milk delivered. But for the whole Russia the share of 1st class quality raw milk is only 5% of the whole milk."* *"The biggest problem with the Russian suppliers is the insufficient quality of the raw supplies. They cannot deliver the quality which the market requires, maybe only partly."* *"In Russia it is very often the case that the conditions of the production do not allow for a certain quality known in Germany. I know one beef producer which grows German Fleckvieh. There is no possibility to slaughter the cattle over 500 kg, whereas the quality of the beef meat from Fleckvieh shows only beginning with 650-700 kg calf".* *"... the product and process quality of Russian suppliers do not correspond with the standards of Western retailers and processors. Russian suppliers cannot afford to achieve such standards partly because of existing infrastructure problems."*

Research issue	Findings	Illustrative quotations
Russian management style	Russian suppliers lack of professionalism in general, which results in absence of readiness to have long-term relationships.	*"The main problem in Russian agri-food companies is the distribution of tasks among different departments in the company. Very often financial and management department is not informed about the current state of agricultural work on the field and does not know what to do."* *"Very often the conflicts appear because of the uncoordinated behavior of different departments within the firm. For example, the financial or managerial department might make the wrong decision and the logistic department will carry out the wrong order."* *"The work with foreign supermarkets differs from that one with Russian partners in the way that foreign supermarkets have better working ethics and management systems. Russian supermarkets sometimes may surprise us with additional conditions not stated before."* *"They do their best to organize their work, but sometimes it is not enough. So for example, we can very well manage just-in time delivery, but our trucks may end up waiting for many hours to be unloaded in the yard of the retailer."*
Opportunism, unreliability and absence of trust	Russian suppliers have little or no loyalty and commitment. They leave whenever they find better conditions without thinking about long-term relationships.	*"In Russia people have very often a different understanding of the concept of punctuality and discipline."* *"... you have to control and monitor suppliers on a regular basis, otherwise they will be tempted to steal or economize on something and not to conduct the whole process as it is required."* *"Russian companies often are less reliable than foreign in terms of delivery terms."* *"This is one of the specific features of the Russian market – one cannot say that Russian suppliers are equivalent to the German or French suppliers. They are less reliable."* *"For example, if Westphalia sells milk carousel to a Russian dairy farm, it has to wait until it gets the payment and then install the equipment, otherwise it may end up running after its money for a long time. The same is with German retailer in Russia Metro. Normally you can pay the suppliers not earlier then when the goods are delivered and are waiting in the truck in the yard."*
Administrative barriers, logistics and infrastructure problems	Challenges for foreign firms in Russia include administrative barriers, logistics and infrastructure problems, etc.	*"In Russia one of the main problems which retailer face is administrative barriers. There are many different kinds of documents and payments which you have to do and gather before you can open a store."* *"Some of the problems of big supermarket chains include problems of logistics. You see Metro and Auchan usually are situated in Moscow and some other big cities. There are 7 Auchans outside the Moscow city ring and 1 inside. It is connected with the high area rents inside the ring since it is closer to the center. Accordingly such supermarkets are quite far from the farms and producers situated in Moscow Oblast or even other oblasts."*

Research issue	Findings	Illustrative quotations
Power in Russian supply chains and networks		
Existence and distribution of power	Power is on the side of retailers. Suppliers dream about working with a big retailer.	*"I would say that we have power parity, since there are also some big branded processors which have not less power than retailers."* *"Can you imagine, if the producers produce their milk and cannot sell it? They have to have reliable processors which will buy their milk and market it further."*
Sources of power	Sources of power include: access to the market; number of alternative buyers or suppliers; access to resources; switching costs; size of the company; expertise in management and logistics systems; good connections with administration, etc.	*"...he who has access to the market, he has the power."* *"Power has anyone who has access to critical resources. Even the seller of theater tickets will apply his power on you, because you do not have what he has. The same situation is in the food industry. If you have a resource which others do not have and would like to have, and it gives you power."*
Use of influence strategies in supplier-buyer relationships in Russia		
Existence of influence strategies	Influence strategies exist and could be classified according to the framework of Hunt and Nevin (1974).	*"International milk processors are using a system of sanctions for bad quality milk and for insufficient volume of delivery. There are two very common mechanisms for punishing the supplier: to cut the price and to terminate the relationship."* *"Actually suppliers of milk are already used to indirect sanctions and punishments. For example, depending on the number of bacteria in the milk they are paid according to the quality classes. If the milk contains not more than 150000 bacteria, it belongs to the 1st class and is paid with 11 rubles per kg. If this number is between 150000 and 250000 the milk is 2nd class and is paid with 9 rubles per kg. So if the farmer wants to get more money, it is motivated to deliver better quality milk."*

Research issue	Findings	Illustrative quotations
Effects of using influence strategies for supply chain management	Such mechanisms as threats and penalties were considered to be not very effective, whereas bonuses and business talks seem to be more effective for maintaining a harmonious relationship.	*"We do not use any coercive means such as threats, sanctions or fines, because they do not allow us to reach our goal which is to have long-term relationships with our suppliers. Any kind of coercive measure may destroy the motivation of the suppliers, therefore we use other worked out management approaches with our suppliers, but not punishments."* *"Through contracts the buyer can guarantee the trade conditions and can punish or go to court if the conditions of the contract are not fulfilled. But the most reasonable thing would be to try to understand why the supplier cannot fulfill the certain terms of the contract and try to support it through consultation and educational activities. I think that punishments and threats are not successful in building long-term partnership."*

Source: own accomplishment on the basis of conducted expert interviews

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Agri-food Supply Chain

| Agricultural producers | Food processors | Retailers | Consumers |
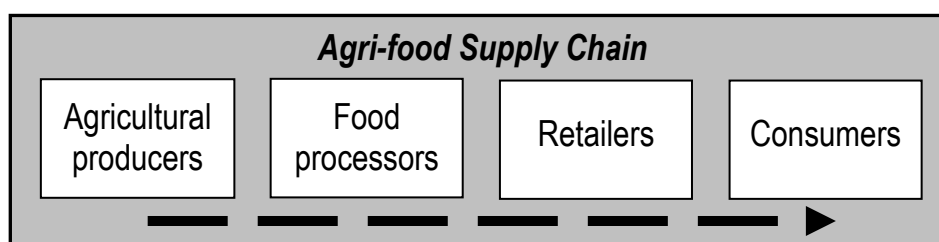
Survey as part of the Ph.D. project

"Mechanisms for managing agri-food supply chains in Russia"

Dear Sir or Madam,

one of the main issues faced by international retailers and branded food processors („supply chain captains") in their work with Russian suppliers is using the right mechanisms in order to manage agri-food supply chains successfully. Is it enough to use information exchange across the supply chain? Are stricter measures such as formal contracts or legal sanctions necessary to insure that the suppliers comply with the requests of supply chain captains?

To answer these and other questions, Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO) is conducting a research project on mechanisms for managing agri-food supply chains in Russia. Your answers could substantially improve the common understanding of the existing problems and allow deriving recommendations for managerial decision makers. We will gladly share with you the results of the survey upon your request.

We would like to ask you as an expert to answer the following questions. All contributions will be handled anonymously. It will take you approx. **10-15** minutes.

Thank you in advance for your support and consideration!

Section I. *Mechanisms for managing agri-food supply chains*

1. In which area does your company work?

□ Food processing □ Retail trade □ Other (please specify)…………………………………. ……………………………………………………………………

2. Do you offer any branded food or beverage products? Please name one. …………………………………………………………………………………

3. Do you feel responsible to coordinate the supply chain of this product ("from the field to the fork")? □ Yes □ No

Please answer the questions in the next sections with respect to the supply chain of the product you named.

4. The 'stick or carrot' method has long been recognized as a mechanism for achieving the compliance with the requirements in order to achieve favourable outcomes in supply chain management. How often do you apply the following mechanisms in your work with your partners?

		Suppliers					Buyers				
		Not at all	Seldom	Often	Very often	Don't know	Not at all	Seldom	Often	Very often	Don't know
1	Supervision or monitoring of your suppliers' activities	□	□	□	□	□	□	□	□	□	□
2	Assessing activities and overall performance	□	□	□	□	□	□	□	□	□	□
3	Constructive criticism of your suppliers' actions	□	□	□	□	□	□	□	□	□	□
4	Expressing your opposition or contempt	□	□	□	□	□	□	□	□	□	□
5	Warning to cancel the business relationship	□	□	□	□	□	□	□	□	□	□
6	Threatening to invest less into the business relationship	□	□	□	□	□	□	□	□	□	□
7	Lowering discounts or other commercial rewards	□	□	□	□	□	□	□	□	□	□
8	Monetary penalties (fees, fines, delistings etc.)	□	□	□	□	□	□	□	□	□	□
9	Promising to provide discounts in case of fulfilment of specific tasks	□	□	□	□	□	□	□	□	□	□
10	Promising to provide better service in case of compliance	□	□	□	□	□	□	□	□	□	□
11	Encouraging your partners by emphasizing their strengths	□	□	□	□	□	□	□	□	□	□
12	Offering your support to solve problems	□	□	□	□	□	□	□	□	□	□
13	Discounts, attractive credit terms or payment schemes	□	□	□	□	□	□	□	□	□	□
14	Financial assistance programmes	□	□	□	□	□	□	□	□	□	□

5. Sharing key information with other members of the supply chain e.g. through customized web pages, common databases, resource inventories and data syntheses is important for the overall functioning of the supply chain. How often do you apply the following mechanisms in your work with your partners?

		Suppliers					*Buyers*				
		Not at all	Seldom	Often	Very often	Don't know	Not at all	Seldom	Often	Very often	Don't know
1	Offering specific work-skills training	□	□	□	□	□	□	□	□	□	□
2	Organizing workshops, seminars or other educational activities	□	□	□	□	□	□	□	□	□	□
3	Offering advice according to your market expertise	□	□	□	□	□	□	□	□	□	□
4	Suggesting a certain activity according to your experience, knowledge or abilities	□	□	□	□	□	□	□	□	□	□
5	Providing ongoing business consultation on production issues	□	□	□	□	□	□	□	□	□	□
6	Providing ongoing business consultation on marketing issues	□	□	□	□	□	□	□	□	□	□
7	Providing market or production related information	□	□	□	□	□	□	□	□	□	□
8	Transfer of know-how and innovative technologies	□	□	□	□	□	□	□	□	□	□
9	Discussing the overall strategy of operations	□	□	□	□	□	□	□	□	□	□
10	Negotiating a common agreement on a certain issue	□	□	□	□	□	□	□	□	□	□
11	Using systems thinking to demonstrate the advantages of your suggested approach	□	□	□	□	□	□	□	□	□	□
12	Using supportive information (facts, figures, examples, etc.) in order to convince	□	□	□	□	□	□	□	□	□	□

6. Formal or informal agreements might be an efficient way of achieving compliance. How often do you apply the following mechanisms in your work with your partners?

		Suppliers					Buyers				
		Not at all	Seldom	Often	Very often	Don't know	Not at all	Seldom	Often	Very often	Don't know
1	Informal agreements (oral, etc.)	□	□	□	□	□	□	□	□	□	□
2	Doing your suppliers' favours hoping that such action will be reciprocated in the future	□	□	□	□	□	□	□	□	□	□
3	Short-term (monthly) or medium-term (annual) formal arrangements	□	□	□	□	□	□	□	□	□	□
4	Long-term written contracts (over 1 year)	□	□	□	□	□	□	□	□	□	□
5	Referring to legal agreements attempting to influence actions	□	□	□	□	□	□	□	□	□	□
6	Reminding your suppliers of their legal obligations	□	□	□	□	□	□	□	□	□	□
7	Stressing that accepting your suggested course of actions would improve the business relationship with you	□	□	□	□	□	□	□	□	□	□
8	Implying that your partners' past good business relationship with you requires them to comply with your requests	□	□	□	□	□	□	□	□	□	□
9	Asking for compliance by making it explicit that it is intended for the good of your partners' business operation	□	□	□	□	□	□	□	□	□	□
10	Describing positive consequences of your partners' compliance with your requests (e.g., that your partner would be more profitable)	□	□	□	□	□	□	□	□	□	□
11	Asking for compliance to your requests not indicating any positive or negative outcome for their business	□	□	□	□	□	□	□	□	□	□
12	Asking to accept your ideas without explaining the possible effect on your partners' business relationship with you	□	□	□	□	□	□	□	□	□	□

7. While coordinating the supply chain, to what extent do you influence your partners' intentions, actions or behaviour?

a) **Suppliers**

b) **Buyers**

0%	25%	50%	75%	100%	0%	25%	50%	75%	100%

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Section II. *Problems of managing agri-food supply chains*

8. How often do you encounter the following problems while working with your partners?

		Suppliers					Buyers				
		Not at all	Seldom	Often	Very often	Don't know	Not at all	Seldom	Often	Very often	Don't know
1	Administrative and bureaucratic barriers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	Cultural and communication barriers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	Transport, logistics and infrastructure problems	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	Insufficient quality of products	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	Lack of partners' professionalism and managerial skills	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	Partners' failure to meet delivery terms	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	Absence of readiness to have long-term relationships	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	Absence of partners' loyalty and commitment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9	Partners' high or costly demands	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10	Other (please specify)………………………………………..	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

9. The crucial question is how to organize the participating firms along the supply chain. But different problems may occur. The first set of problems addresses the alignment of actions of different actors. How satisfied are you with the following coordination aspects of working with your partners?

		Suppliers					Buyers				
		Very dissatisfied	Dis-satisfied	Satisfied	Very satisfied	Don't know	Very dissatisfied	Dis-satisfied	Satisfied	Very satisfied	Don't know
1	Predictability of actions and/or behaviour	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	Knowledge about task distribution within the supply chain	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	Synchronization of logistics processes	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	Timeliness and completeness of deliveries or orders	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	Knowledge about managerial decision making concepts	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	Similarities in organizational systems	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	Understanding of tasks and activities partners are required to perform	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	Responsiveness to requests e.g. regarding product and process quality	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

10. The second set of problems of managing supply chain relationships stems from conflict of interests, values and aims among the different supply chain actors. How satisfied are you with the following cooperative aspects of working with your partners?

		Suppliers					Buyers				
		Very dissatisfied	Dis-satisfied	Satisfied	Very satisfied	Don't know	Very dissatisfied	Dis-satisfied	Satisfied	Very satisfied	Don't know
1	Access to strategy-related information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	Accuracy of provided information about the next steps of collaboration	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	Similarities in interests, goals and strategies	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	Similarities in cultural norms and values	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	Prevention of violation of contractual or relational norms	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	Prevention of withholding or distorting information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	Willingness to perform required tasks or meet your demands	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	Readiness to accept your strategic guidance	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section III. *Information about you and your business partners*

11. Please evaluate the availability of resources in your company and in the companies of your partners.

		Your company					Suppliers					Buyers				
		No	Low	Medium	High	Don't know	No	Low	Medium	High	Don't know	No	Low	Medium	High	Don't know
1	Financial resources (access to credits, other funds, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	Expertise (managerial skills, experienced personnel, know-how, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	Market position (access to market, market share, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	Information (about consumer preferences, demand, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	Image (strong brands, good connections with partners, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

12. To what extent do you agree with the following statements?

		Suppliers					Buyers				
		Fully Disagree	Partly disagree	Partly agree	Fully Agree	Don't know	Fully Disagree	Partly disagree	Partly agree	Fully Agree	Don't know
1	We are working with the same partners for a long time	□	□	□	□	□	□	□	□	□	□
2	We can easily substitute our partners	□	□	□	□	□	□	□	□	□	□
3	Our partners could easily substitute us by another partner	□	□	□	□	□	□	□	□	□	□
4	We are constantly searching for new partners	□	□	□	□	□	□	□	□	□	□
5	We easily find a way to resolve our common problems	□	□	□	□	□	□	□	□	□	□
6	We have a lot of disagreements with our partners	□	□	□	□	□	□	□	□	□	□

13. Please describe your partners (number, average firm size, structure and origin of your partners).

		1-5	5-10	10-15	15-20	20-25	> 25	Average firm size (L -large, M - medium, S - small)	Share in your partners' structure, %	Origin (Russian, other country, mixed)
1	Agricultural organizations	□	□	□	□	□	□	……………………	……………………	……………………
2	Farmers	□	□	□	□	□	□	……………………	……………………	……………………
3	Agricultural cooperatives	□	□	□	□	□	□	……………………	……………………	……………………
4	Individual households	□	□	□	□	□	□	……………………	……………………	……………………
5	Suppliers of food additives	□	□	□	□	□	□	……………………	……………………	……………………
6	Food processors	□	□	□	□	□	□	……………	……………………	……………………
7	Packing enterprises	□	□	□	□	□	□	……………………	……………………	……………………
8	Logistics companies	□	□	□	□	□	□	……………………	……………………	……………………
9	Wholesalers/distributors	□	□	□	□	□	□	……………	……………………	……………………
10	Retailers	□	□	□	□	□	□	……………………	……………………	……………………
11	Other companies (please name)…………………	□	□	□	□	□	□	……………………	……………………	……………………

14. How far is your geographically farthest partner situated from you? ……………………….. ....……

15. What is the firm size of your company? a) Number of employees…………………..…………… b) Sales volume…………………………………

Thank you!

If you'd like to receive results of the survey, please indicate your email address:……………………………………

Appendix 7. Information about interviews (Telephone Survey B)

№	Date	Time (German)	Job title	Company name	Type of product	City in Russia	Country of origin	Language	Duration	Type of company	Number of employees	Sales volume
1	31.03.10	4.00-4.15 p.m.	General Director	Paradiesfrucht GmbH	Freeze dried fruits	Moscow	Germany	Russian	15 min.	Processer	200 (Russian company)	200 million € (mother company)
2	01.04.10	10.50-11.00 a.m.	Category Manager of Purchase Department	OOO Billa, REWE Group Russia	Fresh fruits	Moscow	Germany	Russian	10 min.	Retailer	5000 (Russian company)	320 million € (mother company)
3	01.04.10	03.30-04.00 p.m.	Head of Controlling Group, Financial Department	Tchibo CIS LLC	Coffee	Moscow	Germany	Russian	30 min.	Processer	300 (Russian company)	8.788 million € (mother company)
4	08.04.10	02.10-02.25 p.m.	Head of Strategic Buying Department	Chipita LLC	Savoury pastry products (snacks, bread chips)	St. Petersburg	Greece	Russian	15 min.	Processer	750 (Russian company)	65 million € (mother company)

5	08.04.10	02.40-02.50 p.m.	Supply Chain Controller	Metro Cash & Carry Russia	Pastry products	Moscow	Germany	English	15 min.	Retailer/ Wholesaler	290000 (mother company)	68 billion € (mother company)
6	08.04.10	03.00-03.10 p.m.	Logistics Manager	Danone Group Russia	Drinkable yoghurts	Moscow	France	Russian	15 min.	Processer	2500 (Russian company)	1.21 billion rubles (Russian company)
7	08.04.10	03.15-03.30 p.m.	Head of Logistics Department	Danone Group Russia	Yoghurt desserts	St. Petersburg	France	Russian	15 min.	Processer	2500 (Russian company)	1.21 billion rubles (Russian company)
8	08.04.10	03.45-04.00 p.m.	Customs and Certification Specialist	Chipita LLC	Croissants	St. Petersburg	Greece	Russian	15 min.	Processer	750 (Russian company)	65 million € (mother company)
9	08.04.10	04.00-04.10 p.m.	Logistics Manager	OOO Nestle Russia	Chocolate	Moscow	Switzerland	Russian	15 min.	Processer	n/a	47.47 billion rubles (Russian company)

10	08.04.10	04.15-04.25 p.m.	Supply Chain Project Manager	Metro Cash & Carry Russia	Canned vegetables	Moscow	Germany	Russian	10 min.	Retailer/ Wholesaler	290000 (mother company)	68 billion € (mother company)
11	13.04.10	10.30-10.45 a.m.	Manager of Purchase Department	Lactalis, Le Groupe Lactalis	Cheese	Moscow	France	Russian	15 min.	Processer	36500 (mother company)	9.35 billion € (mother company)
12	13.04.10	11.25-11.35 a.m.	Manager of Purchase Department	Chupa Chups	Sweets	St. Petersburg	Spain	Russian	15 min.	Processer	2000 (mother company)	500 million € (mother company)
13	13.04.10	03.00-03.15 p.m.	Head of Process and Information Management	Auchan	Cheese	Moscow	France	Russian	15 min.	Retailer	243000 (mother company)	39.6 billion € (mother company)
14	13.04.10	04.20-04.30 p.m.	General Director	Bagci	Fish	Moscow	Turkey	Russian	15 min.	Processer	50 (Russian company)	20 million rubles (Russian company)
15	14.04.10	09.30-09.40 a.m.	Financial and Administrative Director	OOO Storck	Sweets	Moscow	Germany	Russian	10 min.	Processer	n/a	n/a

16	14.04.10	10.00-10.15 a.m.	Sales Manager	Dr. Oetker	Fruit desserts	Moscow	Germany	Russian	15 min.	Processer	9200 (mother company)	1.787 million € (mother company)
17	14.04.10	11.20-11.30 a.m.	Sales Manager	Barry Callebaut	Chocolate	Moscow	Switzerland	Russian	15 min.	Processer	7000 (mother company)	4.8 billion CHF / 3.2 billion € (mother company)
18	14.04.10	11.50-00.00 a.m.	Manager of Purchase Department	Unilever	Tea	Moscow	USA	Russian	15 min.	Processer	163000 (mother company)	39.823 million € (mother company)
19	14.04.10	02.10-02.20 p.m.	Manager of Purchase Department	Chupa Chups	Sweets	Moscow	Spain	Russian	15 min.	Processer	2000 (mother company)	500 million € (mother company)
20	14.04.10	02.25-02.35 p.m.	Logistics Manager	La Marée LLC	Fish	Moscow	France	Russian	15 min.	Processer	187 (Russian company)	65 million rubles (Russian company)

21	14.04.10	02.50-03.00 p.m.	Sales Manager	OOO Ritter Sport	Chocolate	Moscow	Germany	Russian	15 min.	Processer	n/a	n/a
22	14.04.10	03.45-03.55 p.m.	Sales Coordinator	Chipita LLC	Sweet pastry products (cakes, biscuit rolls)	Moscow	Greece	Russian	10 min.	Processer	750 (Russian company)	65 million € (mother company)
23	14.04.10	04.00-04.45 p.m.	Category Development Manager	Coca-Cola Hellenic Bottling Company S.A.	Coca cola	Moscow	USA	Russian	45 min.	Processer	44230 (mother company)	399.2 million € (mother company)
24	19.04.10	03.30-03.45 p.m.	General Director	Globus	Meat and meat products	St. Wendel	Germany	German	15 min.	Retailer	30000 (mother company)	6 billion € (mother company)
25	20.04.10	09.20-09.30 a.m.	Supply Chain Manager	ZAO Hamé Foods Russia	Canned meat specialties	Moscow	Czech Republic	Russian	15 min.	Processer	150 (Russian company)	65 million € (mother company)
26	20.04.10	10.00-10.10 a.m.	Sales Manager	ZAO Rieberson Russia Production	Chocolate covered nuts	Moscow	Norway	Russian	15 min.	Processer	3558 (mother company)	4.6 billion NOK (mother company)

27	20.04.10	10.20-10.30 a.m.	Logistics Manager	Auchan	Canned vegetables	Samara	France	Russian	10 min.	Retailer	243000 (mother company)	39.6 billion € (mother company)
28	22.04.10	00.45-01.00 p.m.	Manager of Purchase Department	Heineken	Beer	St. Petersburg	The Netherlands	Russian	15 min.	Processer	n/a	n/a
29	22.04.10	01.00-01.20 p.m.	Manager of Purchase Department	Van Rees L.L.C.	Tea	Moscow	The Netherlands	Russian	20 min.	Processer	100 (Russian company)	35 million rubles (Russian company)
30	22.04.10	01.25-01.35 p.m.	Manager of Purchase Department	Montana Coffee	Coffee	Moscow	USA	Russian	15 min.	Processer	180 (Russian company)	70 million rubles (Russian company)
31	22.04.10	02.30-02.40 p.m.	Logistics Manager	ZAO Milford	Tea	Moscow	Germany	Russian	15 min.	Processer	250 (mother company)	250 million € (mother company)
32	22.04.10	02.50-03.00 p.m.	Sales Manager	OOO Agrana Fruit	Fruit juice concentrates	Moscow	Austria	Russian	15 min.	Processer	8140 (mother company)	2.03 billion € (mother company)

33	22.04.10	03.10-03.20 p.m.	Quality Manager	Heinz	Tomato ketchup	Moscow	USA	Russian	15 min.	Processer	32500 (mother company)	10.070 billion $ (mother company)
34	22.04.10	03.30-03.40 p.m.	Manager of Purchase Department	OOO Bonduelle	Canned vegetables	Moscow	France	Russian	10 min.	Processer	n/a	1.235 million € (mother company)
35	23.04.10	00.40-00.50 p.m.	Quality Manager	OOO Onken, Dr. Oetker Group	Fruit yoghurts	Belgorod	Germany	Russian	15 min.	Processer	9200 (mother company)	1.787 million € (mother company)
36	23.04.10	01.00-01.10 p.m.	Supply Chain and Operations Director	Friesland Campina Russia	Fruit yoghurts	Stupino, Moscow Region	Germany	Russian	15 min.	Processer	n/a	158.6 billion rubles (Russian company)
37	23.04.10	01.15-01.40 p.m.	Head of Supply Chain Department	Metro Cash & Carry Russia	Meat and meat products	Moscow	Germany	Russian	25 min.	Retailer/ Wholesaler	290000 (mother company)	68 billion € (mother company)

38	28.04.10	11.50-12.10 a.m.	Manager of Purchase Department	ZAO Ferrero Russia	Chocolate bars	Moscow	Italy	Russian	20 min.	Processer	21500 (mother company)	6.3 billion € (mother company)
39	29.04.10	00.45-00.55 p.m.	Sales Manager	Frosta	Ready-to-cook frozen meat and vegetable dishes	Moscow	Germany	Russian	10 min.	Processer	n/a	n/a
40	29.04.10	01.15-01.30 p.m.	Sales Manager	Hortex	Frozen fruits and vegetables	Warsaw	Poland	English	15 min.	Processer	n/a	n/a
41	29.04.10	01.45-01.57 p.m.	Logistics Manager	Kellogg's	Ready cereals breakfasts	Moscow	USA	Russian	12 min.	Processer	25000 (mother company)	11.8 billion $ (mother company)
42	29.04.10	02.15-02.25 p.m.	Export Manager	OOO Dirol Cadbury	Chewing gum	Velikiy Novgorod	USA	Russian	15 min.	Processer	55833 (mother company)	6.158 billion € (mother company)
43	29.04.10	04.00-04.30 p.m.	Quality Manager	OOO Agrana Fruit	Canned fruits	Serpukhov, Moscow Region	Austria	Russian	30 min.	Processer	8140 (mother company)	2.03 billion € (mother company)
44	04.05.10	11.10-11.20 a.m.	Sales Manager	ZAO Pivovarnya Moskva-Efes	Beer	Moscow	Turkey	Russian	15 min.	Processer	n/a	n/a

45	04.05.10	11.33-11.45 a.m.	Sales Manager	OOO Inmarko, Unilever Holding Group	Ice cream	Novosibirsk	The Netherlands /UK	Russian	12 min.	Processer	163000 (mother company)	39.823 million € (mother company)
46	04.05.10	00.10-00.20 p.m.	Manager of Purchase Department	OOO Gallina Blanca	Instant soups	Moscow	Spain	Russian	10 min.	Processer	113 (Russian company)	43 million rubles (Russian company)
47	04.05.10	02.00-02.10 p.m.	Manager of Purchase Department	OOO PepsiCo Bottling Company	Pepsi Cola	Moscow	USA	Russian	10 min.	Processer	185000 (mother company)	39.474 billion $ (mother company)
48	05.05.10	11.10-11.20 a.m.	Manager of Purchase Department	OOO Mareven Food Central	Instant noodles	Moscow	Vietnam	Russian	15 min.	Processer	150 (Russian company)	30 million rubles (Russian company)
49	05.05.10	01.05-01.15 p.m.	Sales Manager	OOO SAB Miller Russia	Beer	Kaluga	USA	Russian	15 min.	Processer	n/a	1.87 billion rubles (Russian company)

50	05.05.10	01.30-01.40 p.m.	Sales Manager	SUN InBev OJSC, Anheuser-Busch InBev Group of Companies	Beer	Moscow	Belgium	Russian	15 min.	Processer	n/a	39.7 billion rubles (Russian company)
51	05.05.10	2.00-02.10 p.m.	Logistics Manager	Auchan	Confectionary products	Moscow	France	Russian	10 min.	Retailer	243000 (mother company)	39.6 billion € (mother company)
52	05.05.10	02.50-03.00 p.m.	Sales Manager	OAO Lebedyanskiy, PepsiCo Bottling Group of Companies	Fruit juice	Moscow	USA	Russian	15 min.	Processer	185000 (mother company)	39.474 billion $ (mother company)
53	12.05.10	00.00-00.15 p.m.	Product Manager	OOO Frito-Lay Manufacturing, PepsiCo Bottling Group of Companies	Potato chips	Moscow	USA	Russian	15 min.	Processer	185000 (mother company)	39.474 billion $ (mother company)
54	12.05.10	01.15-01.35 p.m.	Senior Sales Assistant	OOO Milana Food	Instant noodles	Moscow	Vietnam	Russian	20 min.	Processer	200 (Russian company)	72 million rubles (Russian company)

55	12.05.10	02.00-02.10 p.m.	Logistics Manager	OOO Farm Frites	Processed potatoes (pommes frites, mashed potatoes)	Moscow	The Netherlands	Russian	15 min.	Processer	n/a	n/a
56	13.05.10	02.35-02.45 p.m.	Purchase Specialist	OOO Lon-Yuian	Poultry products	Kaliningrad	China	Russian	15 min.	Processer	140 (Russian company)	34 million rubles (Russian company)
57	13.05.10	03.00-03.10 p.m.	Sales Director	OOO Delizie mediterrane	Dairy products	Moscow	Italy	Russian	15 min.	Processer	179 (Russian company)	70 million rubles (Russian company)
58	13.05.10	03.30-03.40 p.m.	Sales Manager (Key Clients)	OOO Nidan-Gross, Coca-Cola Hellenic Bottling Group of Companies	Fruit juice	Moscow	USA	Russian	10 min.	Processer	44230 (mother company)	399.2 million € (mother company)
59	14.05.10	03.30-03.40 p.m.	Product Manager	OOO Kochmeister	Frying fat	Moscow	Germany	Russian	15 min.	Processer	n/a	n/a
60	14.05.10	04.00-04.25 p.m.	Sales Manager	ZAO Master Beverage Industries	Tea	Moscow	Singapore	Russian	25 min.	Processer	200 (Russian company)	80 million rubles (Russian company)

61	14.05.10	04.30-5.00	Logistics Director	A. Le Coq Tartu Õlletehas	Beer	Moscow	Estonia	Russian	30 min.	Processer	n/a	n/a
62	17.05.10	11.30-11.45 a.m.	Logistics Manager	OOO Soltein	Low-alcoholic and energy drinks	Moscow	Germany	Russian	15 min.	Processer	n/a	n/a
63	17.05.10	01.00-01.20 p.m.	Manager of Purchase Department	OOO IREKS	Confectionary products	Moscow	Germany	Russian	20 min.	Processer	50 (Russian company)	23 million rubles (Russian company)
64	17.05.10	03.30-03.40 p.m.	Sales Manager	SEDNA Industries, Inc.	Fish products	Moscow	USA	Russian	15 min.	Processer	300 (Russian company)	115 million rubles (Russian company)
65	18.05.10	10.00-10.10 a.m.	Logistics Manager	OOO RTS, Meggle Group	Butter	Moscow	Germany	Russian	15 min.	Processer	n/a	n/a
66	18.05.10	10.30-10.45 a.m.	Key Clients Manager	Baltika Breweries, Carlsberg Group of Companies	Beer	St. Petersburg	Denmark	Russian	15 min.	Processer	n/a	92.48 billions rubles (Russian company)

67	18.05.10	11.15-11.25 a.m.	Executive Manager	ZAO Bridgetown Foods	Potato chips	Moscow	Cyprus	Russian	15 min.	Processer	250 (Russian company)	95 million rubles (Russian company)
68	18.05.10	03.15-03.30 p.m.	Sales Manager	OOO Valio	Dairy products	Moscow	Finland	Russian	15 min.	Processer	200 (Russian company)	60 million rubles (Russian company)
69	18.05.10	04.10-04.20 p.m.	Brand Coordinator	OOO IDS Borjomi, Georgian Glass & Mineral Waters (GG&MW)	Mineral water	Moscow	Georgia/UK	Russian	15 min.	Processer	400 (Russian company)	180 million rubles (Russian company)
70	19.05.10	10.40-.10.50 a.m.	Manager of Purchase Department	OOO Fazer Amika, Fazer Confectionery Group	Bread and pastry products	St. Petersburg	Finland	Russian	15 min.	Processer	n/a	n/a
71	19.05.10	01.00-01.15 p.m.	Product Manager (oil)	OAO Efremovskiy GPK, CARGILL Group of Companies	Vegetable and sunflower seeds oil	Tula	USA	Russian	15 min.	Processer	160000 (mother company)	120 billion $ (mother company)

72	19.05.10	02.25-02.35 p.m.	Manager of Purchase Department	ZAO Makharishi Products	Sweet pastry products (cakes)	Fryazino, Moscow region	Italy	Russian	15 min.	Processer	200 (Russian company)	85 million rubles (Russian company)
73	19.05.10	3.15-03.25 p.m.	Strategic Buyer (green coffee)	OOO Paulig Coffee, Gustav Paulig Group of Companies	Coffee	Moscow	Finland	Russian	15 min.	Processer	n/a	650 million € (mother company)
74	19.05.10	03.50-04.00 p.m.	Manager of Logistics Department	AO Emborg Foods, Uhrenholt Group of Companies	Frozen vegetables	Moscow	Denmark	Russian	15 min.	Processer	550 (mother company)	n/a
75	19.05.10	4.00-04.15 p.m.	Sales Representative	Premia Foods	Ice cream	St. Petersburg	Estonia	Russian	15 min.	Processer	210 (Russian company)	75 million rubles (Russian company)
76	20.05.10	10.00-10.15 a.m.	Manager of Purchase Department	OOO Mai, World Coffee Group of Companies	Coffee	Moscow	Germany	Russian	15 min.	Processer	150 (Russian company)	50 million rubles (Russian company)

77	02.06.10	01.45-02.00 p.m.	Sales Manger	Campbell's Soup Company	Meat and mushroom soups	Moscow	USA	Russian	15 min.	Processer	24000 (mother company)	7.59 billion $ (mother company)
78	02.06.10	02.35-02.45 p.m.	Quality manager	AO Podravka	Dry soups with noodles	Moscow	Croatia	Russian	10 min.	Processer	180 (Russian company)	80 million rubles (Russian company)
79	02.06.10	3.00-3.40 p.m.	Sales Manager	OOO Baskin Robbins Soviet International	Ice cream	Moscow	USA	Russian	40 min.	Processer	n/a	n/a
80	02.06.10	4.00-4.15 p.m.	Purchase manager	OOO Zentis Russland	Confectionary products	Moscow	Germany	Russian	15 min.	Processer	n/a	n/a
81	03.06.10	01.30-01.40 p.m.	Logistics Manager	OOO United Bakers, Kellogg's Group of Companies	Pastry products	Pskov	USA	Russian	15 min.	Processer	25000 (mother company)	11.8 billion $ (mother company)
82	03.06.10	02.00-02.15 p.m.	Sales Assistant	OOO Sara Lee Rus	Coffee	Moscow	USA	Russian	15 min.	Processer	n/a	13 billion $ (mother company)

83	03.06.10	03.50-04.00 p.m.	Sales Manager	Perfetti Van Melle	Chewing gum	Moscow	The Netherlands /Italy	Russian	15 min.	Processer	17000 (mother company)	1.972 billion € (mother company)
84	03.06.10	04.00-04.15 p.m.	Information Manager	Bunge CIS LLC	Olive oil	Moscow	The Netherlands	Russian	15 min.	Processer	350 (Russian company)	135 million rubles (Russian company)
85	08.06.10	11.00-11.15 a.m.	Manager of Purchase Department	Harry's CIS, Barilla Group of Companies	Confectionary products	Moscow	Italy	Russian	15 min.	Processer	18000 (mother company)	4.2 billion € (mother company)
86	09.06.10	02.20-02.30 p.m.	Sales Manager	ZAO Bosca-Rus	Alcoholic beverages	Moscow	Italy	Russian	15 min.	Processer	100 (Russian company)	35 million rubles (Russian company)
87	10.06.10	11.30-11.50 p.m.	Product Manager	Arla Foods	Dairy products	Moscow	Norway	Russian	20 min.	Processer	15927 (mother company)	49.469 billion DKK (mother company)
88	10.06.10	01.40-01.55 p.m.	Sales Manager	OOO Döhler NF & BI	Fruit juice concentrates	Moscow	Germany	Russian	15 min.	Processer	n/a	n/a

89	10.06.10	02.30-02.40 p.m.	Logistics Manager	ZAO Jack's	Confectionary products	Moscow	USA	Russian	15 min.	Processer	n/a	n/a
90	10.06.10	03.00-03.15 p.m.	Supply Chain Manager	Vion/Ramfood Group of Companies	Meat products	Moscow	The Netherlands	Russian	15 min.	Processer	15500 (mother company)	n/a
91	10.06.10	04.00-04.15 p.m.	Manager of Purchase Department	OOO Nutrexpa	Chocolate	Moscow	Spain	Russian	15 min.	Processer	150 (Russian company)	60 million rubles (Russian company)
92	15.06.10	02.20-02.35 p.m.	Manager of Purchase Department	ZAO Diageo	Alcoholic beverages	Moscow	UK	Russian	15 min.	Processer	170 (Russian company)	48 million rubles (Russian company)
93	16.06.10	10.15-10.30 a.m.	Product Manager	OOO Milkow	Dairy products	Moscow	Lithuania	Russian	15 min.	Processer	100 (Russian company)	25 million rubles (Russian company)
94	16.06.10	03.10-03.25 p.m.	Sales Manager	Lotte Confectionery Co. Ltd	Confectionary products	Moscow	South Korea	Russian	15 min.	Processer	120 (Russian company)	32 million rubles (Russian company)

95	17.06.10	11.05-11.15 a.m.	Sales Director	OOO Fonterra	Dairy products	Moscow	New Zealand	Russian	15 min.	Processer	n/a	16 billion NZ$ (mother company)
96	17.06.10	02.00-02.10 p.m.	General Manager	OOO Nutricia, Danone Group Russia	Baby food (special nutrition)	Moscow	The Netherlands /France	Russian	15 min.	Processer	2500 (Russian company)	1.21 billion rubles (Russian company)
97	17.06.10	03.45-04.00 p.m.	Manager of Purchase Department	Central European Distribution Corporation (CEDC)	Alcohol beverages	Moscow	Poland	Russian	15 min.	Processer	200 (Russian company)	67 million rubles (Russian company)

Appendix 8. Information about structure of sample (Telephone Survey B)

Structure of sample according to the kind of companies interviewed

8; 8%

89; 92%

☐ Retail companies

☐ Food processing companies

Structure of sample according to the language

German; 1; 1%

English; 2; 2%

Russian; 94; 97%

Duration of interviews

—— Average duration – ca. 16 min.
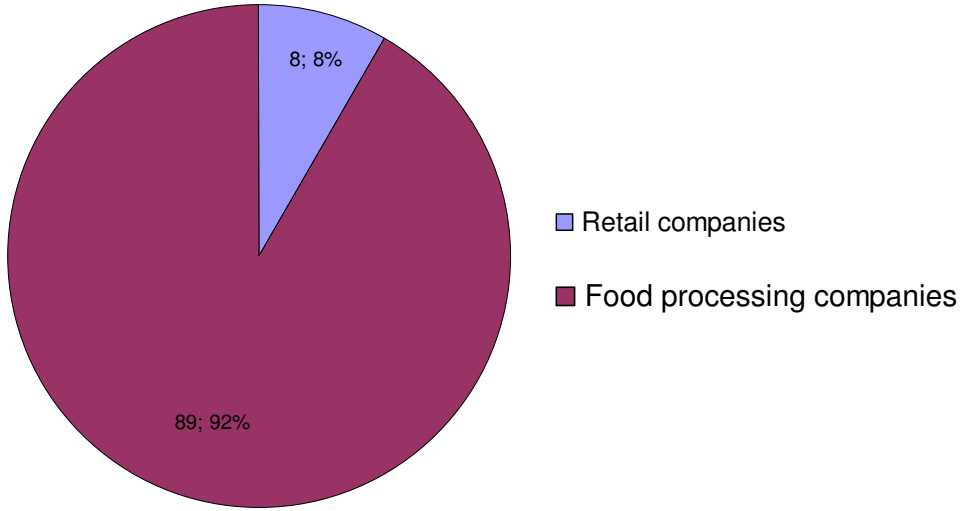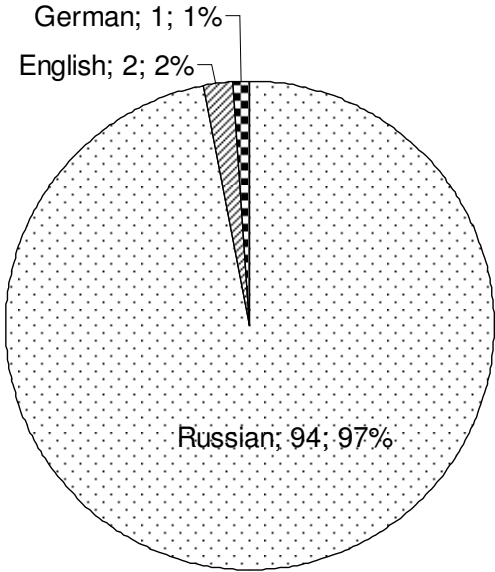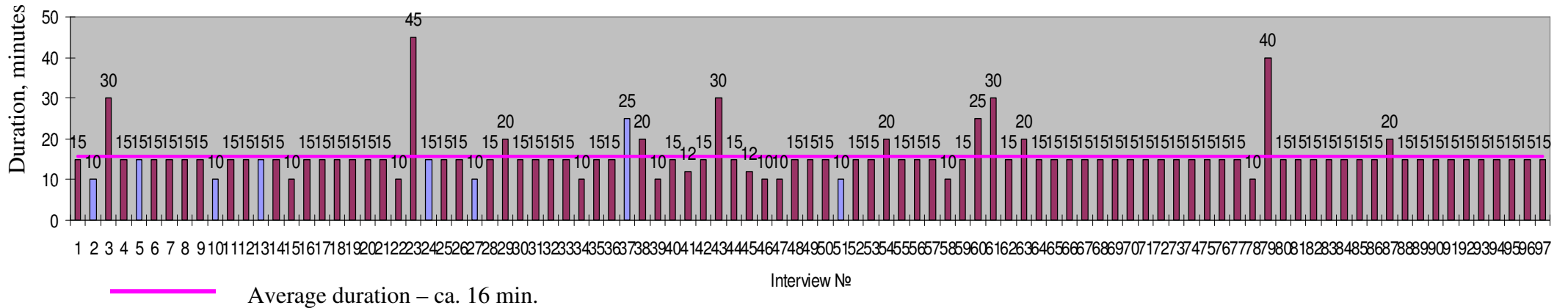
Overall duration – 1534 min. (25,5 hours)

Source: own accomplishment

Appendix 9. Frequencies of use of influence strategies (Telephone Survey B), in %

Coercive influence strategies

Very often	3,6 / 6,1
Often	14,8 / 22,6
Seldom	53,9 / 55,4
Not at all	19,3 / 15,9

Reward influence strategies

Very often	21 / 20,6
Often	49,8 / 61,3
Seldom	13,6 / 13,4
Not at all	7,2 / 3,8

Expert influence strategies

Very often	5,8 / 6,2
Often	30,4 / 41,9
Seldom	24,1 / 28,4
Not at all	31,4 / 23,5

Informational influence strategies

Very often	32,3 / 37,6
Often	40,9 / 46,2
Seldom	14,6 / 13,2
Not at all	3,9 / 2,9

Legitimate influence strategies

Very often	5,7 / 4,8
Often	32,7 / 35,9
Seldom	33,5 / 39,4
Not at all	20 / 20

Referent influence strategies

Very often	15,6 / 13,4
Often	45 / 52,2
Seldom	27,8 / 30,1
Not at all	3,3 / 3,6

□ Use in relationships with suppliers   ■ Use in relationships with buyers

Source: own accomplishment

Appendix 10. Frequencies of being satisfied with coordination and cooperation, problems with partners and specific relationship characteristics (Telephone Survey B), in %

Frequencies of being satisfied with coordination aspects (suppliers), %

Aspect	Values
Predictability of actions and/or behaviour	0 10,3 73,2 16,5 0
Knowledge about task distribution within the supply chain	4,1 12,4 63,9 19,6 0
Synchronization of logistics processes	3,1 27,8 56,7 12,4 0
Timeliness and completeness of deliveries or orders	0 21,6 53,6 24,7 0
Knowledge about managerial decision making concepts	0 18,6 41,2 37,1 3,1
Similarities in organizational systems	0 8,2 62,9 25,8 3,1
Understanding of tasks and activities partners are required to perform	0 11,3 52,6 36,1 0
Responsiveness to requests e.g. regarding product and process quality	3,1 58,8 38,1 0

■ Very dissatisfied ■ Dissatisfied ■ Satisfied ■ Very satisfied ▤ Don't know

Frequencies of being satisfied with cooperation aspects (suppliers), %

Aspect	Values
Access to strategy-related information	3,1 14,4 70,1 11,3 1
Accuracy of provided information about the next steps of collaboration	0 36,1 54,6 9,3 0
Similarities in interests, goals and strategies	0 12,4 71,1 15,5 1
Similarities in cultural norms and values	0 8,2 66 23,7 2,1
Prevention of violation of contractual or relational norms	0 20,6 61,9 17,5 0
Prevention of withholding or distorting information	0 38,1 46,4 15,5 0
Willingness to perform required tasks or meet your demands	2,6,2 60,8 30,9 0
Readiness to accept your strategic guidance	18,2 54,6 36,1 0

■ Very dissatisfied ■ Dissatisfied ■ Satisfied ■ Very satisfied ▤ Don't know

Frequencies of problems while working with partners (suppliers), %

	Not at all	Seldom	Often	Very often	Don't know
Administrative and bureaucratic barriers	47,4	38,1	14,4		0
Cultural and communication barriers	57,7	37,1	5,2		0
Transport, logistics and infrastructure problems	27,8	49,5	19,6	3	0
Insufficient quality of products	50,5	48,5			0
Lack of partners' professionalism and managerial skills	55,7	39,2	5,2		0
Partners' failure to meet delivery terms	77,3	21,6			0
Absence of readiness to have long-term relationships	76,3	22,7			0
Absence of partners' loyalty and commitment	74,2	24,7			0
Partners' high or costly demands	59,8	35,1	5,2		0

Legend: Not at all · Seldom · Often · Very often · Don't know

Frequencies of specific relationship characteristics (suppliers), %

	Fully disagree	Partly disagree	Partly agree	Fully agree	Don't know
We are working with the same partners for a long time	0		44,3	54,6	0
We can easily substitute our partners	7,2	11,3	69,1	11,3	1
Our partners could easily substitute us by another partner	25,8	15,5	57,7		0
We are constantly searching for new partners	0	15,5	84,5		0
We easily find a way to resolve our common problems	7,2	11,3	59,8	21,6	0
We have a lot of disagreements with our partners	30,9	40,2	28,9		0

Legend: Fully disagree · Partly disagree · Partly agree · Fully agree · Don't know

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Frequencies of being satisfied with coordination aspects (buyers), %

	0%	20%	40%	60%	80%	100%

Predictability of actions and/or behaviour — 6,2 | 59,8 | 25,8 | 8,2

Knowledge about task distribution within the supply chain — 3,1 3,1 | 53,6 | 32 | 8,2

Synchronization of logistics processes — 2,1 9,3 | 51,5 | 28,9 | 8,2

Timeliness and completeness of deliveries or orders — 6,2 | 47,4 | 38,1 | 8,2

Knowledge about managerial decision making concepts — 6,2 | 37,1 | 48,5 | 9,3

Similarities in organizational systems — 3,1 | 46,4 | 41,2 | 9,3

Understanding of tasks and activities partners are required to perform — 2,1 | 43,3 | 46,4 | 8,2

Responsiveness to requests e.g. regarding product and process quality — 0 | 41,2 | 49,5 | 8,2

■ Very dissatisfied ■ Dissatisfied ■ Satisfied ■ Very satisfied ▤ Don't know

Frequencies of being satisfied with cooperation aspects (buyers), %

	0%	20%	40%	60%	80%	100%

Access to strategy-related information — 3,1 11,3 | 56,7 | 19,6 | 9,3

Accuracy of provided information about the next steps of collaboration — 0 20,6 | 51,5 | 19,6 | 8,2

Similarities in interests, goals and strategies — 7,2 | 64,9 | 19,6 | 8,2

Similarities in cultural norms and values — 4,1 | 58,8 | 26,8 | 10,3

Prevention of violation of contractual or relational norms — 0 9,3 | 47,4 | 35,1 | 8,2

Prevention of withholding or distorting information — 2,1 19,6 | 39,2 | 30,9 | 8,2

Willingness to perform required tasks or meet your demands — 3,1 | 47,4 | 41,2 | 8,2

Readiness to accept your strategic guidance — 4,1 | 45,4 | 42,3 | 8,2

■ Very dissatisfied ■ Dissatisfied ■ Satisfied ■ Very satisfied ▤ Don't know

Frequencies of problems while working with partners (buyers), %

Administrative and bureaucratic barriers	56,7	28,9	6,2	8,2
Cultural and communication barriers	64,9	22,7	4,0	8,2
Transport, logistics and infrastructure problems	45,4	34	10,3	8,2
Insufficient quality of products	61,9	28,9	8,2
Lack of partners' professionalism and managerial skills	69,1	20,6	2,0	8,2
Partners' failure to meet delivery terms	76,3	15,5	8,2
Absence of readiness to have long-term relationships	73,2	18,6	8,2
Absence of partners' loyalty and commitment	78,4	13,4	8,2
Partners' high or costly demands	58,8	27,8	5,2	8,2

☐ Not at all ☐ Seldom ☐ Often ■ Very often ☐ Don't know

Frequencies of specific relationship characteristics (buyers), %

We are working with the same partners for a long time	2,1	40,2	49,5	8,2
We can easily substitute our partners	9,3	9,3	63,9	9,3	8,2
Our partners could easily substitute us by another partner	17,5	15,5	58,8	8,2
We are constantly searching for new partners	0	11,3	80,4	8,2
We easily find a way to resolve our common problems	7,2	11,3	56,7	16,5	8,2
We have a lot of disagreements with our partners	26,8	37,1	27,8	8,2

☐ Fully disagree ☐ Partly disagree ☐ Partly agree ■ Fully agree ☐ Don't know

Source: own accomplishment

Appendix 11. Availability of resources (number of answers) (Telephone Survey B)

Financial resources (access to credits, other funds, etc.)
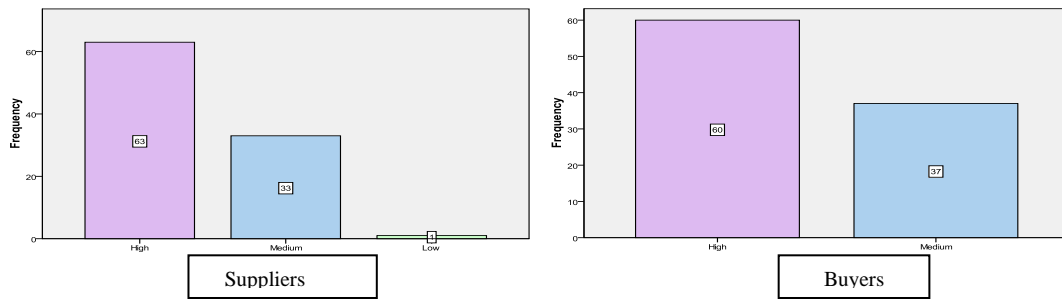
Suppliers | Buyers

Expertise (managerial skills, experienced personnel, know-how, etc.)

Suppliers | Buyers

Market position (access to market, market share, etc.)

Suppliers | Buyers

Information (about consumer preferences, demand, etc.)

Suppliers | Buyers
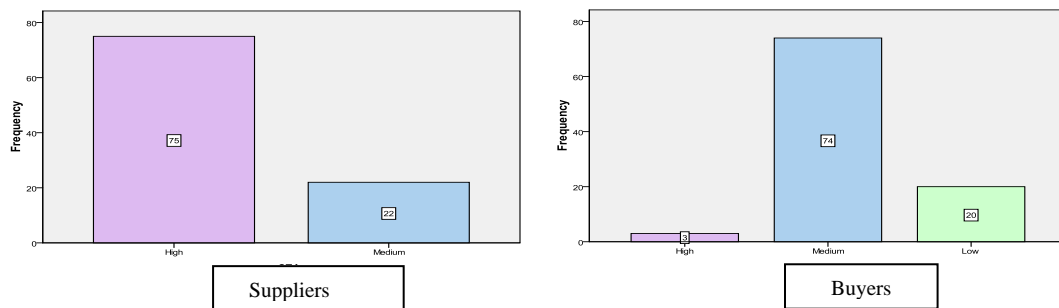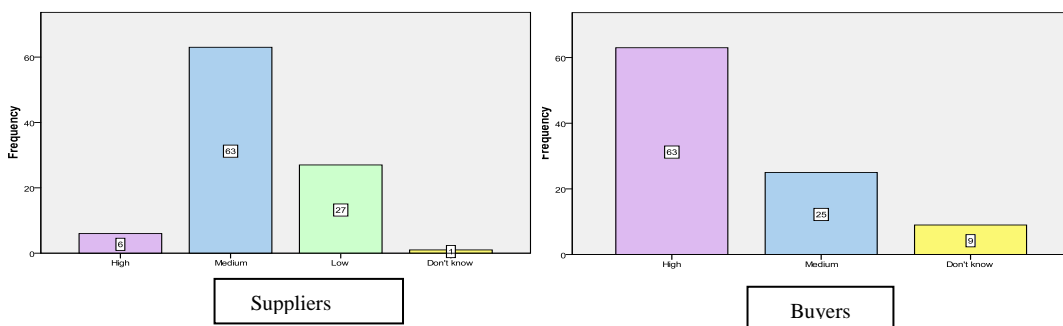
Image (strong brands, good connections with partners, etc.)

Suppliers | Buyers

Source: own accomplishment

Appendix 12. Summary of findings from expert interviews (Telephone Survey B)

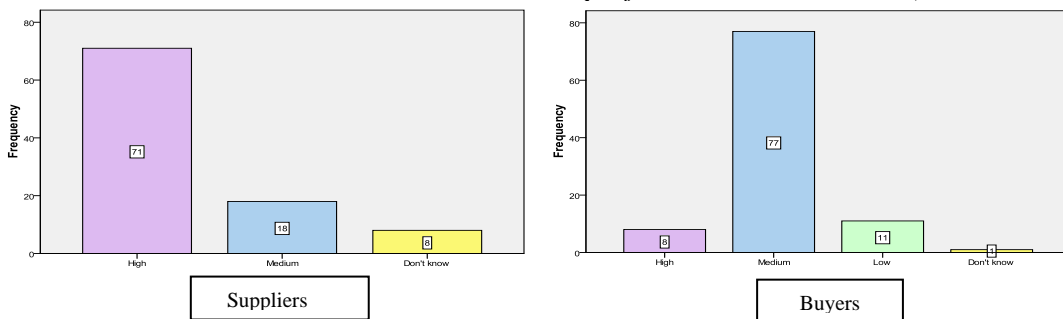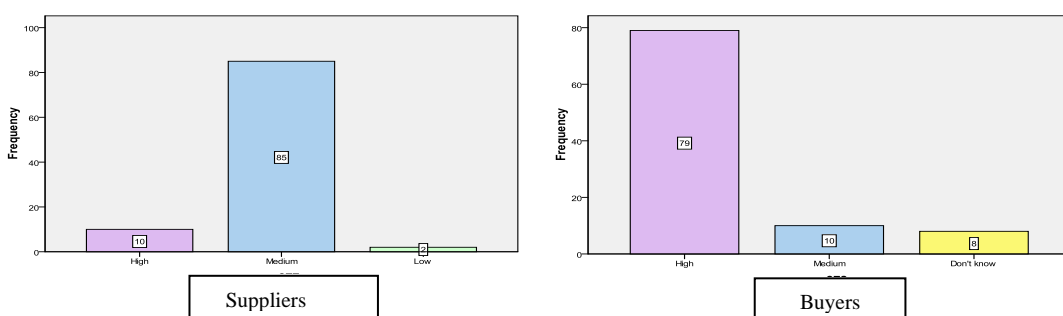| Research issue	Findings	Illustrative quotations
		Supplier-buyer relationships in Russia
General characteristics	Due to the different interests of both sides there is some tension in the supplier-buyer relationships.	"…both sides understand that they will need to work not only today, but also tomorrow and the day after tomorrow" "…the problem of the supplier is to show and convince the representative of retail network that the offered version of cooperation will be favourable to both organizations" "…if these are complex products having a low degree of standardization, then the creation of partner relationships with suppliers is very important".
Problems with suppliers	Problems with suppliers include: contractual conditions, lack of professionalism and reliability, absence of readiness to have long-term relationships and logistics problems.	"One step to the left – you have earned some money, a step to the right and you are ruined" "One of the main problems is also catastrophically low level of trust. In Russia people have been cheated already so many times that they do not trust anyone at any conditions". "A supplier sends the offer to a network in such type, which you simply cannot imagine: text without a uniform blank and without paragraphs, half of text is emphasized with a computer since it is full of mistakes. Such suppliers will of course not be considered." "...supplier in the category which had the goods and a possibility to deliver in this network informed in 3 days after the price arrangement has been reached that its prices have grown by 30 %. This network accepted it. There was nothing to do but to accept the new price. But the main thing, that this supplier has raised the prices by additional 15 % in 2 days after the network has agreed on 30 %-increase. The majority of suppliers act similarly."
Problems with retailers	Problems with retailers include: unfair policy of retailers, toughening of conditions and discrimination at the conclusion of delivery contracts.	suppliers "…suffer from retailers which take the delivered products and do not pay back for a long time" retailers "…reduce prices literally to the bottom threshold of profitability" of suppliers retailers "…press on suppliers using a monopoly position in the market" "…the giant manufacturers investing into promotion of brands billions of rubles may sometimes pay nothing to the retailers for accommodation of their goods" "...networks show rigid uniform style in work with suppliers" "…no entrance bonuses are necessary to networks, since they have free money of suppliers on 90 - 120 days and besides, the additional discount"

Research issue	Findings	Illustrative quotations
Power in Russian supply chains and networks		
Existence of power	Existence of power was confirmed	"…for the last years some networks have turned to be not only very powerful, but become the aggressive players which alter rules of work on the market under own discretion"
Distribution of power	The counterbalance of power is by all means on the side of buyers.	"…this parity is frequently acting not in favour of suppliers" "Since there are more suppliers than processors and retailers, suppliers have less power." „…when it is a preferred supplier he has more power than a small and unknown supplier"
Existence and use of influence strategies for supply chain management		
Coercive influence strategies	Coercive influence strategies were seen both in a negative and positive light, depending on the object and purpose of use.	"…the fees paid by suppliers would be possible to recognize as the mechanism of competitive selection of the best manufacturers" "…it is economically inexpedient to use partner relationships with all suppliers" "If we are speaking of the suppliers of simple products with a high degree of standardization, it could make sense to apply hard methods." "...such mechanisms as threats and penalties are not very effective because they show that the company is aggressive" "...such approach in short-term prospect can yield positive results, but in long-term is not always effective"
Reward influence strategies	Reward influence strategies were stated to be important.	"Certainly, it requires additional expenses of time and forces, but at the same time allows reducing expenses and to raise a degree of adaptation of the enterprise to changing market conditions not only in short-term, but also over the longer term". "The company has simply terminated contracts with all networks this year and does not work with anybody except for Auchan because it pays without delays"
Expert influence strategies	Foreign retailers and manufacturers possessing more expertise use expert influence strategies.	"Western companies have brought not only new management approaches to Russia but also innovative products such as drinking yoghurts and curt (partly curt – partly yoghurt)". suppliers "...have only minimal, and is frequent also simply zero information on work of commercial structures of the potential customer"
Informational influence strategies	Informational influence strategies and their positive sides were more praised and acknowledged than the expert ones.	"The fundamental importance has the creation of a database of the list of potential suppliers which allows obtaining information quickly about suppliers with desirable characteristics" "By tradition manufacturers had the greatest market information concerning their products. Now it is not so. As retail commerce has cash department, and by means of a bar code of a product, can collect the information on the sold goods and on preferences of clients. The information is the powerful weapon in hands of trading chains..." "…supplier maybe also interested in reception of trustworthy information how those or other types of the goods are getting sold"

Research issue	Findings	Illustrative quotations
Legitimate influence strategies	Use of legitimate influence strategies is the precondition of harmonious relationships	"*... a contract with suppliers which defines the rights and duties of each side and also timeframes of payments. Both sides put the signatures, confirming, that conditions of the contract suit everyone. Therefore there is no room for conflicts.*" "*The system of justice in Russia works in such a way that the judges are not allowed to acquit more than 1% of all cases. Therefore, the chance that the legal proceedings will result in indictment is quite high*"
Referent influence strategies	Use of referent influence strategies is observed.	"*…it is difficult to say who influences whom to what extent, because there are different sources of influence. For example, our company has a strong image and it gives us the basis for our influence.*" "*…among advantages of work with networks of the company mark the additional total profit received as a result of advancing growth of sales volumes in comparison with growth of costs*".

Source: own accomplishment on the basis of conducted expert interviews

Appendix 13. Graphical representation of theoretical model with operationalization of variables
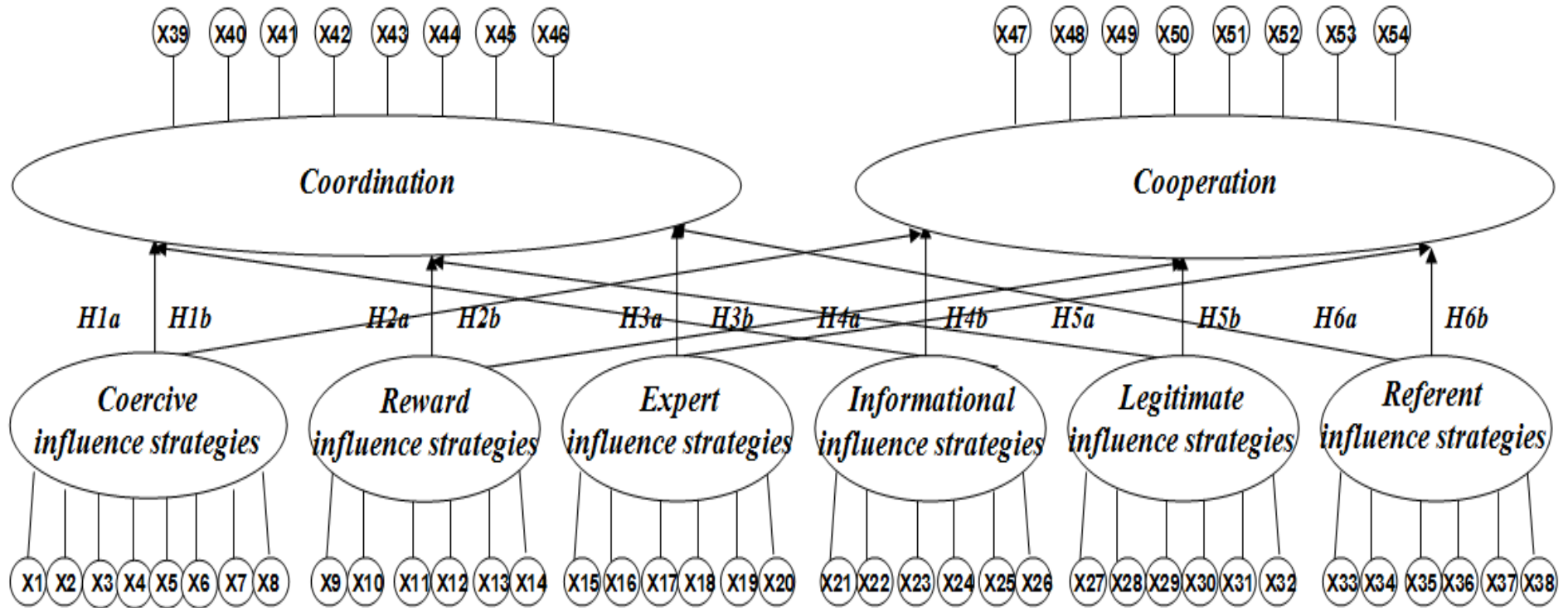
Source: own accomplishment

Appendix 14. Literature review on construct measurement and scale development

Constructs	Measurement items	Literature
	Coercive influence strategies	
Monitoring	*In our business unit* *- We constantly monitor our level of commitment and orientation to serving customer's needs.* *- Our top managers from every function regularly visit our current and prospective customers.*	Narver and Slater (1990)
	- The manufacturer's personnel would somehow get back at us if we didn't do as they asked and they would've found out.	Brown et al. (1995)
Threat	*- makes it clear that failing to comply with their requests will result in penalties against our business* *- threatens poorer service to our business should we fail to agree to their requests* *- uses threats of disturbing our business, such as higher prices for supplies, slow delivery times, and lower fill rates* *- communicates their ability to make "things difficult" for our business if specific demands are not met* *- states that specific services will be discontinued for not complying to requests* *- threatens to reduce the amount of business they will do with our firm, should their demands not be met*	Boyle et al. (1992)
	"Our franchiser. . ." *- makes it clear that failing to comply with their requests will result in penalties against our business* *- communicates their ability to make "things difficult" for our business if specific demands are not met* *- states that specific services will be discontinued for not complying with standards*	Tikoo (2002)
	- Your supplier stated or implied that you might receive poorer service and/or cooperation if you did not comply	Frazier and Summers (1984)
	- You were threatened by your supplier if you failed to abide by his/her requests involving certain critical matters	Frazier et al. (1989)
	- Your supplier threatened to make things difficult if you did not agree to the request. *- Your supplier hinted that he would take certain actions that would reduce your profits if you did not accept the program.* *- If you did not go along with your supplier s/he threatened to withdraw certain services from you.* *- If you had not agreed to his/her suggestion, your supplier would have made things difficult for you.* *- Your supplier threatened to cancel or refused to renew your contract if you refused the request.*	John (1981)
	- Your supplier made it clear that by failing to follow his/her recommendations, your business would suffer (i.e., lower profit, volume or share). *- Your supplier stated or implied that by not following suggestions, your firm would be less profitable (or have lower volume or share).* *- If you did not comply with the request, your supplier predicted lower profits (share or volume) for your firm.* *- Your supplier anticipated that failure to adhere to his/her advice would lead your company to make less money or to lower sales, etc.* *- Your supplier suggested that if you didn't stick to his/her proposals your firm would be less lucrative.* *- Your supplier told you that not following his/her proposals would have an adverse effect on your firm.*	Stoddard et al. (2000)

Constructs	Measurement items	Literature
Punishment	- Indicated that there would be a penalty for noncompliance. - Threatened to discontinue specific benefits for noncompliance. - Stated that your firm would lose preferential status for noncompliance.	Payan and McFarland (2005)
	- How often do the manufacturer's representatives state or imply that you would receive poorer service and/or cooperation (or other, similar negative consequences) from them if you did not comply with their request?	Kale (1986)
	- Your U.S. maker threatens to penalize you (e.g., decrease product supplies or increase prices) when you do not comply with its suggestions.	Johnson et al. (1990)
	- Your supplier lowered your discounts (quantity, cash, functional or promotional) with no notice or requests. - Your supplier penalized you (or your firm) monetarily with no previous notice or reasons. - Your supplier tightened your payment terms with no prior announcements or requests for anything from you. - Without notification, your supplier withheld financial incentives without asking for anything from you. - Without an announcement or requests your supplier punished your firm financially. - Without your advanced knowledge your supplier fined your firm, monetarily.	Stoddard et al. (2000)
	- When you do not do as it wishes, your U.S. maker applies negative sanctions to your company.	Johnson et al. (1990)
Reward influence strategies		
Promise	- makes promises to give something back in return for specific actions of our dealership - provides price breaks or other incentives for our participation in manufacturer promos, showroom design, and other programs - emphasizes what they will offer in return for our cooperation or participation when presenting a . . . - offers specific incentives for us to make changes in marketing and/or operating procedures - uses bonuses for meeting sales or profit quotas - offers incentives to us when we initially had been reluctant to cooperate with a new program or policy	Boyle et al. (1992)
	"Our franchiser. . . " - makes promises to give something back in return for specific actions of our franchise business - offers specific incentives for us to make changes in marketing and/or operating procedures - emphasizes what they will offer in return for our cooperation or participation when presenting a new program or policy	Tikoo (2002)
	- Your supplier stated or implied that you would receive better service and/or cooperation if you complied with a request.	Frazier and Summers (1984)
	- When attempting to influence you, your supplier implied that you would receive better service and/or cooperation if you complied with their requests.	Frazier et al. (1989)
	- Your supplier promised to make things easier for you if you agreed to the request. - Your supplier hinted that he would take certain actions that would increase your profits if you accepted the program.	Stoddard et al. (2000)
	- Offered an incentive for compliance with their request. - Promised your firm a reward for your firm's cooperation. - Indicated how they would reward your firm's conformance with a request.	Payan and McFarland (2005)
	- How often do the manufacturer's representatives state or imply that you would receive better service and/or cooperation if you complied with their request?	Kale (1986)
	- Your U.S. maker promises that it will help you be successful in your business activities if you comply with its wishes.	Johnson et al. (1990)

Constructs	Measurement items	Literature
Approval	- *Unexpectedly, your supplier provided approval and praise for the job you were doing.* - *Without warning your supplier gave you his/her support and admiration.* - *Your supplier unexpectedly endorsed and applauded your actions.* - *Without notification, your supplier offered you his/her compliments and respect.* - *Out of the blue, your supplier approved of your work and congratulated you.* - *In an unforeseen move, your supplier expressed his/her admiration and appreciation for your achievements.*	Stoddard et al. (2000)
	- *Your supplier unexpectedly stated his/her disapproval for the job you were doing.* - *Out of the blue your supplier expressed his/her opposition and disrespect for you for no particular reason.* - *In an unforeseen move, your supplier denounced and criticized your actions.* - *Without notification your supplier belittled and mocked you.* - *Your supplier unexpectedly rejected and belittled your work.* - *Without warning, your supplier expressed his/her contempt and dislike for your achievements.*	Stoddard et al. (2000)
Reward	- *Your supplier provided increased discounts (quantity, cash, functional or promotional) with no prior notice and no strings attached.* - *Your supplier gave you (or your firm) monetary inducements without previous notice or any action requested on your part.* - *Your supplier unexpectedly furnished more liberal allowances (e.g., time and conditions of payment) with no matching requests.* - *Without notification, your supplier offered you financial incentives without asking for anything in return.* - *Without an announcement or requests your supplier gave you (or your firm) a financial reward.* - *Without your advanced knowledge, your supplier presented you (or your firm) with a monetary bonus that you didn't have to do anything for.*	Stoddard et al. (2000)
	- *When you comply with your U.S. maker's wishes in an important matter, it rewards you financially.*	Johnson et al. (1990)
Expert influence strategies		
Expert advice	- *We usually got good advice from the manufacturer.*	Brown et al. (1995)
	- *Suggested you would be more successful financially if you followed their advice.*	Payan and McFarland (2005)
	- *XXX retains business expertise that makes them likely to suggest the proper thing to do.*	Maloni and Benton (1999)
	- *Your U.S. maker has extensive experience with your product and market which it uses to influence your decisions.* - *Your U.S. maker uses its technical expertise to influence your decisions.*	Johnson et al. (1990)
	- *We trusted the manufacturer's judgment.* - *The manufacturer's business expertise made them likely to suggest the proper thing to do.* - *The people in the manufacturer's organization knew what they were doing.* - *We usually got good advice from the manufacturer.* - *The manufacturer had specially trained people who really knew what had to be done.*	Brown et al. (1995)
Consultation	- *Asked the group which agency they thought would be most suitable.* - *Sought advice as to which agency would be good to work with.* - *Asked members of the group which agency they preferred.* - *Sought opinions as to which agencies were not suitable.*	Farrell and Schroder (1996)

Constructs	Measurement items	Literature
Training	- Specific work-skills training (technical and vocational) given to hourly employees in the firm - Quality-related training given to hourly employees throughout the firm - Quality-related training given to managers and supervisors throughout the firm - Firm-wide training in the total quality concept (philosophy of company-wide responsibility for quality) - Firm-wide training in basic statistical techniques (e.g., histograms and control charts) - Firm-wide training in advanced statistical techniques (e.g., design of experiments and regression analysis) - Commitment of top management to employee training - Available resources for employee training	Forker and Stannack (2000)
	Informational influence strategies	
Information exchange	- focuses on general strategies (as opposed to specific tactics) as to how to make our business more profitable - concentrates more on strategic, long-term issues, rather than specific courses of action our business should take - discusses the orientation our management personnel should take with regard to long-term planning, rather than daily activities - attempts to change our perspective by looking at how our business decisions affect the "big picture"	Boyle et al. (1992)
	"Our franchiser. . . " - concentrates more on long-term issues, rather than on day-to-day business activities - discusses the orientation we should take with regard to long-term planning, rather than daily activities - attempts to change our perspective by looking at how business decisions affect the "big picture."	Tikoo (2002)
	- Provided you with market information without indicating what your firm should do. - Presented competitive information without indicating any action that needed to be taken. - Shared information about his or her company without explanation about his or her objective(s) in sharing this information.	Payan and McFarland (2005)
	- During your typical monthly contacts with the manufacturer's representatives, how frequently do they merely discuss the overall strategy of your business activities (e.g., the necessity of a technically trained staff, etc.) without making specific statements about what they would like you to do?	Kale (1986)
	- Your U.S. maker attempts to influence you through the use of information that will contribute to your success in your business activities.	Johnson et al. (1990)
	- Your providing information to the manufacturer via face-to-face interaction with salespeople, telephone interaction with salespeople, technical support, written letters, correspondence, computer link, trade shows, dealer councils, seminars	Mohr and Sohi (1995)
	- The information the manufacturer provided us made sense. - The manufacturer often had more information than we did. - The manufacturer convinced us that it made sense to follow their suggestions. - The manufacturer knew more than we did about what needed to be done. - We went along with what the manufacturer wanted last year because the information they provided was very convincing	Brown et al. (1995)
Debate	- Sales representative merely discuss the overall strategy of dealership operations (e.g., the effects of inventory levels on sales or the necessity of a good service department) without making specific statements about what he would like you to do.	Frazier and Summers (1984)
Persuasion	- Made a case based on past experience with similar issues that you should comply.	Payan and McFarland (2005)

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Constructs	Measurement items	Literature
	- Used facts and logic to make a persuasive case for selecting one agency in preference over others. - Presented a convincing argument that a particular agency would perform better than others. - Provided evidence that one agency in particular would be better suited to handling your organization's advertising. - Cited several examples of the work that a particular agency had produced.	Farrell and Schroder (1996)
	Legitimate influence strategies	
Cooperative norm	- Our attachment to this manufacturer is primarily based on the similarity of our values and those of the manufacturer. - The reason we prefer this manufacturer to others is because of what it stands for, its values. - During the past year, our dealership's values and those of the manufacturer have become more similar. - What this manufacturer stands for is important to our dealership. - If the values of this manufacturer were different, our dealership would not be as attached to this manufacturer.	Brown et al. (1995)
	- If either of us has a problem, we can count on each other's support to find a solution. - We are happy to do this customer's favours, as we know that such action will be reciprocated in the future. - When an unexpected situation arises that proves detrimental to either party, we would both rather work out a new deal than hold each other to the original terms. - If either of us encounters unexpected problems or needs, we are both able to be flexible and adapt to the changing circumstances. - We receive a fair proportion of the benefits that are generated from this relationship. - We believe that this customer strives to take action that benefits the relationship as a whole, rather than looking for ways to fulfil its own interests at our expense. - This customer keeps us informed about events or changes that may affect us. - We are confident this customer does not withhold information that could be of use to our firm.	Duffy and Fearne (2004)
	- No matter who is at fault, problems are joint responsibilities. - Both sides are concerned about the other's profitability. - One party will not take advantage of a strong bargaining position - Both sides are willing to make cooperative changes. - We must work together to be successful. - We do not mind owing each other favors.	Siguaw et al. (1998)
	- Your supplier made you feel that you had an obligation to do it even though it was not part of the contract. - Your supplier stated or implied that unreliable customers would not take part. - Your supplier indicated that only unfaithful customers wouldn't participate in the program. - Your supplier suggested that ''bad clients'' would not participate. - Your supplier made you feel that failure to participate in the program would be wrong (inappropriate, unfair). - Your supplier implied that by not participating in the program, your firm was being ''disloyal.''	Stoddard et al. (2000)
	- They felt he had the authority to ask for their compliance - They felt someone in his job position had a legitimate right to influence the purchase decisions - They felt obligated to comply with him because of his formal position in the organization - They felt that the purchase decision should reflect his preferences because he had more at stake than others - They felt they ought to comply with him because the purchase decision would affect him more than others	Kohli (1989)

Constructs	Measurement items	Literature
Legal contract	- *To influence your decisions, your U.S. maker refers to the written contract between you and your U.S. maker.*	Johnson et al. (1990)
	- *Having the upper hand in the relationship, due to power granted to them by the contract*	Leonidou et al. (2008)
	- *The terms of our relationship have been written down in detail.* - *Our expectations of the other party have been communicated in great detail.* - *In coordinating our activities with the other party, formal contractual terms have been developed.* - *The terms of our relationship with the other party have been explicitly verbalized and discussed.*	Atkin and Rinehart (2006)
	- *The manufacturer often pointed out a contract clause that made us feel obligated to do as asked.*	Brown et al. (1995)
Legalistic plea	- *refers to portions of our franchise agreement which favor their position to gain our compliance on a particular demand* - *makes a point to refer to any legal agreements we have when attempting to influence our actions* - *"reminds us" of any of our obligations stipulated in our sales agreement* - *uses sections of our sales agreement as a "tool" to get us to agree to their demands* - *makes biased interpretations of our selling agreement in order to gain our cooperation in following a request*	Boyle et al. (1992)
	"Our franchiser. . ." - *refers to portions of our franchise agreement which favor their position to gain compliance on a particular demand* - *makes a point to refer to any legal agreements we have when attempting to influence our actions* - *uses sections of our franchise agreement as a "tool" to get us to agree to their demands*	Tikoo (2002)
	- *Your supplier stated or implied that your legal agreement either suggested or required compliance.*	Frazier and Summers (1984)
	- *In attempting to change your behavior, your supplier drew your attention to your contractual agreement with him/her.*	Frazier et al. (1989)
	- *Your supplier pointed out a contract clause that made you feel obligated to do as asked.*	John (1981)
	- *Your supplier indicated that you were contractually bound to observe his/her request.* - *When your supplier requested that you accept the program, s/he referred to any legal documents existing between you.*	Stoddard et al. (2000)
	- *Confronted people and demanded that they carry out a requested action promptly.* - *Keep checking that everyone was still in agreement with him/her as to which agency should be chosen.* - *Implied that everyone should do as s/he says if they are to progress further in this company.* - *Reminded everyone that it was in their best interests to agree with him/her on this particular issue.* - *Says that his/her request is consistent with organization rules and policies.* - *Argued that s/he had the authority to have the greatest input into the decision.* - *Stated that s/be was within their right to influence the decision making.* - *Implied that it was customary for him/her to guide the decision making.*	Farrell and Schroder (1996)
	- *How often do the manufacturer's representatives state that your dealership agreement and/or legal considerations either require or suggest your compliance on a particular issue?*	Kale (1986)

Constructs	Measurement items	Literature
Referent influence strategies		
Appeal	- *Your supplier stated his/her desires concerning the program and stressed that because of his/her friendship and past favors, you owed acceptance of the program.* - *Your supplier explained if you adopted the program your working relationship would improve.* - *Because either you were friends or you owed your supplier a favor, you have to accept the program or lose an ally.* - *Your supplier felt that your rapport or obligations required you to accept the program that the s/he recommended.* - *The working relationship you have with your supplier would be damaged if you didn't accept the requested program.* - *Your supplier noted that you and s/he would become more distant if you didn't accept the requested program.* - *Your supplier reminded you of your friendship or favors owed when s/he asked you to accept the program.* - *When your supplier asked you to accept the program, s/he stressed that your friendship or past favors required you to accept and implied that accepting would improve your relationship.*	Stoddard et al. (2000)
	- *Explained that s/he is in a difficult situation and would really appreciate support.* - *Asked if everyone would stick with him/her when it came down to the final choice.* - *Sought support from the group.* - *Stated that friends should help each other out.*	Farrell and Schroder (1996)
	- *Described the work of one particular agency with enthusiasm and conviction.* - *Argued that it would be an exciting opportunity to work with a particular agency.* - *Stated that a particular agency would produce outstanding advertising* - *Stated that everyone would have a major input into the advertising.*	Farrell and Schroder (1996)
Recommendation	*"My primary supplier . . ."* - *makes it clear that by following their recommendations, our business would benefit* - *makes it explicit, when making a suggestion, that it is intended for the good of our operation* - *provides a clear picture of the anticipated positive impact on our business a recommended course of action will have* - *outlines the logic and/or evidence for expecting success from the specific programs and actions suggested*	Boyle et al. (1992)
	"Our franchiser. . . " - *provides a clear picture of the anticipated positive impact on our business a recommended course of action will have* - *makes it explicit, when making a suggestion that it is intended for the good of our operation* - *states that by following their recommendations, our business would benefit*	Tikoo (2002)
	- *Your supplier stated or implied that by following suggestions, your firm would be more profitable (or have higher volume or greater share).*	Frazier and Summers (1984)
	- *If you complied with the request, your supplier predicted higher profits or (or increased share or volume) for your firm.* - *Your supplier anticipated that by adhering to his/her advice your company would make more money or increase sales, etc.* - *Your supplier suggested that by sticking to his/her proposals your firm would be more lucrative.* - *Your supplier advocated that following his/her proposals would benefit your firm.*	Stoddard et al., (2000)
	- *Provided a picture of the anticipated positive impact to your firm that his or her recommended course of action will have.* - *Predicted positive consequences from the environment (e.g., that your firm would be more profitable) if you complied with their request.* - *Suggested you would be more successful financially if you followed their advice.*	Payan and McFarland (2005)

Const ructs	Measurement items	Literature
	- *How often do the manufacturer's representatives predict positive consequences from the environment (e.g., that your dealership would be more profitable) if you complied with their request?*	Kale (1986)
	- *We yield to recommendations of this manufacturer on general business practices*	Mohr et al. (1996)
Request	- *asks for our compliance to their requests, not indicating any positive or negative outcome for our business contingent upon our compliance* - *asks us to accept new ideas without an explanation of what effect it will have on our business* - *asks our cooperation in implementing new programs without mentioning rewards for complying, or punishments for refusing* - *expects that their requests do not require an incentive for us to comply*	Boyle et al. (1992)
	"Our franchiser. . . " - *asks for our cooperation in implementing new programs without mentioning rewards for complying, or punishments for refusing* - *expects that their requests do not require an incentive* *for us to comply*	Tikoo (2002)
	- *Sales representative merely state his wishes on an issue without mentioning or implying any consequence of your compliance or noncompliance.*	Frazier and Summers (1984)
	- *Your supplier merely stated his/her wishes without mentioning any consequences* - *Your supplier simply stated his/her desires.* - *Your supplier notified you of his/her preferences without reference to either inducements or penalties.* - *Without referring to the likely consequences of accepting or rejecting the program, your supplier directly stated his/her desires to you.* - *The supplier just stated his/her wishes concerning the program.*	Stoddard et al., (2000)
	- *Asked you to accept new ideas without specifying rewards or penalties.* - *Inquired if you would be willing to comply with a request without mention of rewards or penalties.* - *Shared a desire for your firm to make specific changes without incentives.*	Payan and McFarland, (2005)
	- *How often do the manufacturer's representatives merely state their wishes on a particular issue without mentioning or implying any consequences of your compliance or noncompliance?*	Kale (1986)
	Cooperation	
	- *The business relationship our dealership has with our supplier could better be described as a "cooperative effort" rather than an "arm's length negotiation"*	Boyle et al. (1992)
	- *Our company and Manufacturer X are in harmony.*	Anderson and Narus (1984)
	- *Relationship better described as a "cooperative"* - *Perform well together* - *Our future goals best reached by working with XXX* - *We cannot count on XXX to give us support others receive* - *XXX helps us in getting job done*	Maloni and Benton (1999)
	Coordination	
	- *Connected processes and activities were well coordinated with other teams.* - *Duplicated and overlapping coordination activities were avoided.* - *We had no problems in coordinating with other teams.*	Hoegl et al. (2004)
	- *In the business relationship all activities are harmonized to achieve the collaborative goals.*	Arroyo (2003)

Const ructs	Measurement items	Literature
	- *Programs at the local level are well-coordinated with the manufacturer's national programs.* - *We feel like we never know what we are supposed to be doing or when we are supposed to be doing it for this manufacturer's products.* - *Our activities with this manufacturer are well-coordinated.*	Mohr et al. (1996)
	- *Connected processes and activities were well coordinated with other teams.* - *Duplicated and overlapping coordination activities were avoided.* - *We had no problems in coordinating with other teams.* - *The work done on subtasks was closely harmonized.* - *Connected subtasks were well coordinated in our team*	Hoegl et al. (2004)

Source: own accomplishment

Appendix 15. Development of measurement scales

Latent variables	Coding			Manifest variables
	Item Nr.	Supplier	Buyer	
Coercive influence strategies	X1	v_447	v_446	*Supervision or monitoring of your suppliers' activities*
	X2	v_448	v_449	*Assessing activities and overall performance*
	X3	v_450	v_451	*Constructive criticism of your suppliers' actions*
	X4	v_452	v_453	*Expressing your opposition or contempt*
	X5	v_454	v_455	*Warning to cancel the business relationship*
	X6	v_456	v_457	*Threatening to invest less into the business relationship*
	X7	v_458	v_459	*Lowering discounts or other commercial rewards*
	X8	v_460	v_461	*Monetary penalties (fees, fines, delistings etc.)*
Reward influence strategies	X9	v_462	v_463	*Promising to provide discounts in case of fulfilment of specific tasks*
	X10	v_464	v_465	*Promising to provide better service in case of compliance*
	X11	v_466	v_467	*Encouraging your partners by emphasizing their strengths*
	X12	v_468	v_469	*Offering your support to solve problems*
	X13	v_470	v_471	*Discounts, attractive credit terms or payment schemes*
	X14	v_472	v_473	*Financial assistance programmes*
Expert influence strategies	X15	v_474	v_475	*Offering specific work-skills training*
	X16	v_477	v_476	*Organizing workshops, seminars or other educational activities*
	X17	v_479	v_478	*Offering advice according to your market expertise*
	X18	v_481	v_480	*Suggesting a certain activity according to your experience, knowledge or abilities*
	X19	v_483	v_482	*Providing ongoing business consultation on production issues*
	X20	v_484	v_485	*Providing ongoing business consultation on marketing issues*
Informational influence strategies	X21	v_486	v_487	*Providing market or production related information*
	X22	v_488	v_489	*Transfer of know-how and innovative technologies*
	X23	v_491	v_490	*Discussing the overall strategy of operations*
	X24	v_492	v_493	*Negotiating a common agreement on a certain issue*
	X25	v_494	v_495	*Using systems thinking to demonstrate the advantages of your suggested approach*
	X26	v_496	v_497	*Using supportive information (facts, figures, examples, etc.) in order to convince*
Legitimate influence strategies	X27	v_499	v_498	*Informal agreements (oral, etc.)*
	X28	v_501	v_500	*Doing your suppliers' favours hoping that such action will be reciprocated in the future*
	X29	v_503	v_502	*Short-term (monthly) or medium-term (annual) formal arrangements*
	X30	v_504	v_505	*Long-term written contracts (over 1 year)*
	X31	v_507	v_506	*Referring to legal agreements attempting to influence actions*
	X32	v_509	v_508	*Reminding your suppliers of their legal obligations*
Referent influence strategies	X33	v_511	v_510	*Stressing that accepting your suggested course of actions would improve the business relationship with you*
	X34	v_513	v_512	*Implying that your partners' past good business relationship with you requires them to comply with your requests*

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Latent variables	Coding			Manifest variables
	Item Nr.	Supplier	Buyer	
Referent influence strategies	X35	v_515	v_514	*Asking for compliance by making it explicit that it is intended for the good of your partners' business operation*
	X36	v_517	v_516	*Describing positive consequences of your partners' compliance with your requests (e.g., that your partner would be more profitable)*
	X37	v_519	v_518	*Asking for compliance to your requests not indicating any positive or negative outcome for their business*
	X38	v_521	v_520	*Asking to accept your ideas without explaining the possible effect on your partners' business relationship with you*
Coordination	X39	v_313	v_312	*Predictability of actions and/or behaviour*
	X40	v_315	v_314	*Knowledge about task distribution within the supply chain*
	X41	v_317	v_316	*Synchronization of logistics processes*
	X42	v_319	v_318	*Timeliness and completeness of deliveries or orders*
	X43	v_321	v_320	*Knowledge about managerial decision making concepts*
	X44	v_322	v_323	*Similarities in organizational systems*
	X45	v_324	v_325	*Understanding of tasks and activities partners are required to perform*
	X46	v_326	v_327	*Responsiveness to requests e.g. regarding product and process quality*
Cooperation	X47	v_329	v_328	*Access to strategy-related information*
	X48	v_331	v_330	*Accuracy of provided information about the next steps of collaboration*
	X49	v_333	v_332	*Similarities in interests, goals and strategies*
	X50	v_334	v_335	*Similarities in cultural norms and values*
	X51	v_337	v_336	*Prevention of violation of contractual or relational norms*
	X52	v_338	v_339	*Prevention of withholding or distorting information*
	X53	v_341	v_340	*Willingness to perform required tasks or meet your demands*
	X54	v_343	v_342	*Readiness to accept your strategic guidance*

Source: own accomplishment

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Appendix 16. Factor loadings of manifest variables after removing indicators with loading less than 0.4 (Models 1 and 2)

Model 1			Model 2		
Item	Loading	Construct	Item	Loading	Construct
X1	0,934401	Coercive influence strategies	*X1*	0,966869	Coercive influence strategies
X2	0,892990	Coercive influence strategies	*X2*	0,812568	Coercive influence strategies
X9	0,678549	Reward influence strategies	*X9*	0,809695	Reward influence strategies
X10	0,798532	Reward influence strategies	*X11*	0,777532	Reward influence strategies
X11	0,563526	Reward influence strategies	*X12*	0,832419	Reward influence strategies
X12	0,850193	Reward influence strategies	*X17*	0,442958	Expert influence strategies
X16	0,472006	Expert influence strategies	*X18*	0,737776	Expert influence strategies
X17	0,641025	Expert influence strategies	*X19*	0,918404	Expert influence strategies
X18	0,757931	Expert influence strategies	*X20*	0,921028	Expert influence strategies
X19	0,890627	Expert influence strategies	*X21*	0,749760	Informational influence strategies
X20	0,859303	Expert influence strategies	*X22*	0,732998	Informational influence strategies
X21	0,701334	Informational influence strategies	*X23*	0,644642	Informational influence strategies
X22	0,765946	Informational influence strategies	*X24*	0,615444	Informational influence strategies
X23	0,752537	Informational influence strategies	*X25*	0,771902	Informational influence strategies
X24	0,762166	Informational influence strategies	*X26*	0,789704	Informational influence strategies
X25	0,799046	Informational influence strategies	*X27*	0,884303	Legitimate influence strategies
X26	0,712469	Informational influence strategies	*X28*	0,698562	Legitimate influence strategies
X27	0,997623	Legitimate influence strategies	*X33*	0,457311	Referent influence strategies
X28	0,417706	Legitimate influence strategies	*X34*	0,856127	Referent influence strategies
X33	0,897234	Referent influence strategies	*X35*	0,931060	Referent influence strategies
X34	0,866574	Referent influence strategies	*X36*	0,652621	Referent influence strategies
X39	0,830240	Coordination	*X39*	0,728101	Coordination
X40	0,821438	Coordination	*X40*	0,731237	Coordination
X41	0,665596	Coordination	*X41*	0,775302	Coordination
X42	0,550336	Coordination	*X43*	0,495398	Coordination
X49	0,526162	Cooperation	*X44*	0,494321	Coordination
X50	0,421793	Cooperation	*X46*	0,563827	Coordination
X51	0,629684	Cooperation	*X49*	0,557009	Cooperation
X52	0,781502	Cooperation	*X50*	0,609601	Cooperation
X53	0,819112	Cooperation	*X51*	0,605703	Cooperation
X54	0,840760	Cooperation	*X52*	0,791448	Cooperation
			X53	0,837106	Cooperation
			X54	0,821944	Cooperation

Source: own accomplishment

Appendix 17. Summary of implications for management of supplier-buyer relationships in the Russian agri-food business

	Coordination		Cooperation	
	Relationships with suppliers	**Relationships with buyers**	**Relationships with suppliers**	**Relationships with buyers**
Coercive influence strategies	**I1a:** Within a supply chain network, coercive influence strategies are **not recommended** to be used due to *negative* effect on coordination (*Ranking 6 of 6*).	**I1b:** Within a supply chain network, coercive influence strategies are **not recommended** to be used due to *negative* effect on coordination (*Ranking 5 of 6*).	**I1c:** Within a supply chain network, coercive influence strategies are **not recommended** to be used due to *negative* effect on cooperation (*Ranking 6 of 6*).	**I1d:** Within a supply chain network, coercive influence strategies are **not recommended** to be used due to *negative* effect on cooperation (*Ranking 5 of 6*).
Reward influence strategies	**I2a:** Within a supply chain network, reward influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 3 of 6*).	**I2b:** Within a supply chain network, reward influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 2 of 6*).	**I2c:** Within a supply chain network, reward influence strategies are **not recommended** to be used due to *negative* effect on cooperation (*Ranking 4 of 6*).	**I2d:** Within a supply chain network, reward influence strategies are **recommended** to be used due to *positive* effect on cooperation (*Ranking 2 of 6*).
Expert influence strategies	**I3a:** Within a supply chain network, expert influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 1 of 6*).	**I3b:** Within a supply chain network, expert influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 1 of 6*).	**I3c:** Within a supply chain network, expert influence strategies are **recommended** to be used due to *positive* effect on cooperation (*Ranking 1 of 6*).	**I3d:** Within a supply chain network, expert influence strategies are **recommended** to be used due to *positive* effect on cooperation (*Ranking 1 of 6*).
Informational influence strategies	**I4a:** Within a supply chain network, informational influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 4 of 6*).	**I4b:** Within a supply chain network, informational influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 3 of 6*).	**I4c:** Within a supply chain network, informational influence strategies are **recommended** to be used due to *positive* effect on cooperation (*Ranking 2 of 6*).	**I4d:** Within a supply chain network, informational influence strategies are **recommended** to be used due to *positive* effect on cooperation (*Ranking 3 of 6*).
Legitimate influence strategies	**I5a:** Within a supply chain network, legitimate influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 5 of 6*).	**I5b:** Within a supply chain network, legitimate influence strategies are **not recommended** to be used due to *negative* effect on coordination (*Ranking 6 of 6*).	**I5c:** Within a supply chain network, legitimate influence strategies are **not recommended** to be used due to *negative* effect on cooperation (*Ranking 5 of 6*).	**I5d:** Within a supply chain network, legitimate influence strategies are **not recommended** to be used due to *negative* effect on cooperation (*Ranking 6 of 6*).
Referent influence strategies	**I6a:** Within a supply chain network, referent influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 2 of 6*).	**I6b:** Within a supply chain network, referent influence strategies are **recommended** to be used due to *positive* effect on coordination (*Ranking 4 of 6*).	**I6c:** Within a supply chain network, referent influence strategies are **recommended** to be used due to *positive* effect on cooperation (*Ranking 3 of 6*).	**I6d:** Within a supply chain network, referent influence strategies are **not recommended** to be used due to *negative* effect on cooperation (*Ranking 4 of 6*).

Source: own accomplishment

Appendix 18. Summary of contributions of the thesis

1. Extension of the body of knowledge and clarification to the concept of supply chain networks	**Theoretical contributions**
2. Extension of the body of knowledge and clarification to the concept of supply chain management	
3. Extension of the body of knowledge and clarification to the concept of influence strategies	
4. Investigation of the role of influence strategies for supply chain management from the theoretical point of view and working out a theoretical model	

5. Empirical evidence about the relevance of the theoretical frameworks on supply chain management based on the framework of Hanf and Dautzenberg (2006) and of the classification of influence strategies according to the framework of French and Raven (1959)/Raven and Kruglanski (1970) in the Russian agri-food business	**Empirical contributions**
6. Empirical evidence about the characteristics of supplier-buyer relationships in Russian agri-food business on the basis of the conducted qualitative research	
7. Empirical evidence about the relevance and existence of power asymmetry and the distribution of power along the supply chain in the Russian agri-food business	
8. Empirical evidence on the basis of quantitative information about the frequencies of use of influence strategies for improving supply chain management as well as about the level of satisfaction of managers with supply chain management in Russian agri-food supply chains	

9. Development of the operationalizations of variables for the concepts influence strategies and supply chain management	**Methodological contributions**
10. Introduction of Partial Least Squares (PLS) path modelling, the technique of Structural Equation Modelling (SEM), in the setting of the Russian agribusiness management, and clarification of its advantages and disadvantages	

11. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to coordination issues in relationships with suppliers (Managerial implications *I1a, I2a, I3a, I4a, I5a, I6a*)	**Managerial contributions**
12. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to coordination issues in relationships with buyers (Managerial implications *I1b, I2b, I3b, I4b, I5b, I6b*)	
13. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to cooperation issues in relationships with suppliers (Managerial implications *I1c, I2c, I3c, I4c, I5c, I6c*)	
14. Working out of recommendations for managers about the use of different kinds of influence strategies in managing Russian agri-food supply chains with specific attention to cooperation issues in relationships with buyers (Managerial implications *I1d, I2d, I3d, I4d, I5d, I6d*)	

Source: own accomplishment

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ERKLÄRUNG

Hiermit erkläre ich, dass ich die Arbeit selbstständig angefertigt und keine anderen als die angegebenen Hilfsmittel benutzt habe.

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